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ABSTRACT

This module is one of a series of more than 125 performance-based teacher education (PBTE) learning packages focusing upon specific professional competencies of vocational instructors. The competencies upon which these modules are based were identified and verified through research as being important to successful occupational teaching at all levels of instruction. The modules are suitable for the preparation of instructors in all occupational areas. This module is designed to give prospective teachers skill in managing the daily routines of a competency-based education (CBE) program. Its information and practice activities will assist the student teacher in assuming the role of resource assessment in a CBE program. The module consists of a terminal objective, enabling objectives, prerequisites, resources and five learning experiences. The learning experiences, each based on an enabling objective, contain activities, information, case studies, examples, and feedback. The final learning experience is an actual teaching situation in which the prospective teacher is to manage the daily routines of a CBE program and be assessed by a resource person. (KC)

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ED266278

Manage the Daily Routines of Your CBE Program

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FOREWORD

This module is one of a series of over 125 performance-based teacher education (PBTE) learning packages focusing upon specific professional competencies of occupational instructors (teachers, trainers). The competencies upon which these modules are based were identified and verified through research as being important to successful occupational teaching at all levels of instruction. The modules are suitable for the preparation of instructors in all occupational areas.

Each module provides learning experiences that integrate theory and application; each culminates with criterion-referenced assessment of the occupational instructor's performance of the specified competency. The materials are designed for use by teachers-in-training working individually or in groups under the direction and with the assistance of teacher educators or others acting as resource persons. Resource persons should be skilled in the teacher competencies being developed and should be thoroughly oriented to PBTE concepts and procedures before using these materials.

The design of the materials provides considerable flexibility for planning and conducting performance-based training programs for preservice and inservice teachers, as well as business-industry-labor trainers, to meet a wide variety of individual needs and interests. The materials are intended for use by local education programs, postsecondary institutions, state departments of education, universities and colleges, and others responsible for the professional development of occupational instructors.

The PBTE curriculum packages in Category K—Implementing Competency-Based Education (CBE)—are designed to enable occupational instructors to install and manage training programs embodying the principles and concepts of CBE. The modules are based upon 84 teacher competencies identified as essential to installing and managing competency-based occupational instructional programs.

Many individuals and institutions have contributed to the research, development, testing, and revision of these significant training materials. Appreciation is extended to the following individuals who, as members of the DACUM analysis panel, assisted National Center staff in the identification of the teacher competency statements upon which this category of modules is based: Odell Chism, Robert Dubanoski, Neil Reske, Bell Nicholson, Robert Rannells, Richard Sedlacek, William Shoaf, Kris Sitler, Michael Strohaber, and Ann Vescio. Appreciation is also extended to the following individuals for their critical reviews of the modules during the development process: Glen E. Fardig, Robert E. Norton, and Roger Harris.

Field testing of the materials was carried out with the assistance of field-site coordinators, teacher educators, students, directors of staff development, and others at the following institutions: DuPage Area Vocational Education Authority Center, Illinois; Indiana University of Pennsylvania; Pennsylvania State University; Seminole Community College, Florida; Trident Technical College, South Carolina; University of Arkansas, Fayetteville; University of Central Florida; University of Pittsburgh, Pennsylvania; University of Southern Maine; and University of Vermont .

Recognition for major individual roles in the development of these materials is extended to the following National Center staff: Lucille Campbell Thrane, Associate Director, Development Division, and James B. Hamilton, Program Director, for leadership and direction of the project; Michael E. Wonacott and C. Lynn Malowney, Program Associates, for module quality control; Cheryl M. Lowry, Research Specialist, and Billie Hooker, Graduate Research Associate, for developing illustration specifications; Barbara Shea for art work; Andonia Simandjuntak, Graduate Research Associate, for assistance in field-test data summarization; and Glen E. Fardig, Consultant, and Lois G. Harrington, Program Associate, for revision of the materials following field testing.

Special recognition is also extended to the staff at AAVIM for their invaluable contributions to the quality of the final printed products, particularly to Marilyn MacMillan for module layout, design, and final art work; and to George W. Smith, Jr. for supervision of the module production process.

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- Conducting leadership development and training programs.

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MODULE K-5

Manage the Daily Routines of Your CBE Program

Module K-5 of Category K—Implementing Competency-Based Education (CBE)
PROFESSIONAL TEACHER EDUCATION MODULE SERIES

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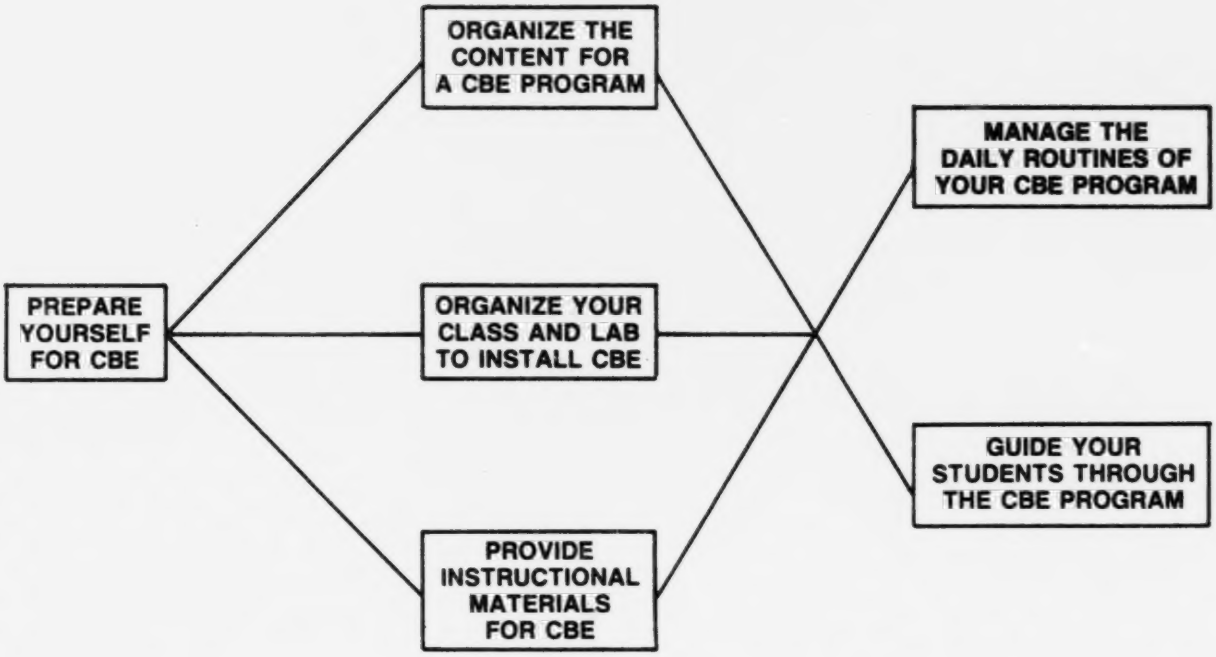

PREPARE YOURSELF FOR CBE
ORGANIZE THE CONTENT FOR A CBE PROGRAM
ORGANIZE YOUR CLASS AND LAB TO INSTALL CBE
PROVIDE INSTRUCTIONAL MATERIALS FOR CBE
MANAGE THE DAILY ROUTINES OF YOUR CBE PROGRAM
GUIDE YOUR STUDENTS THROUGH THE CBE PROGRAM

CBE IMPLEMENTATION PROCESS

INTRODUCTION

Management has always been a very important part of the vocational-technical instructor's job. It is even more important in a competency-based education (CBE) program. Managing a program that seeks, through a CBE approach, to meet the diverse needs and interests of twenty or more students can be a formidable task. To be successful, the instructor must have a well-formulated management plan and skill in putting that plan into action.

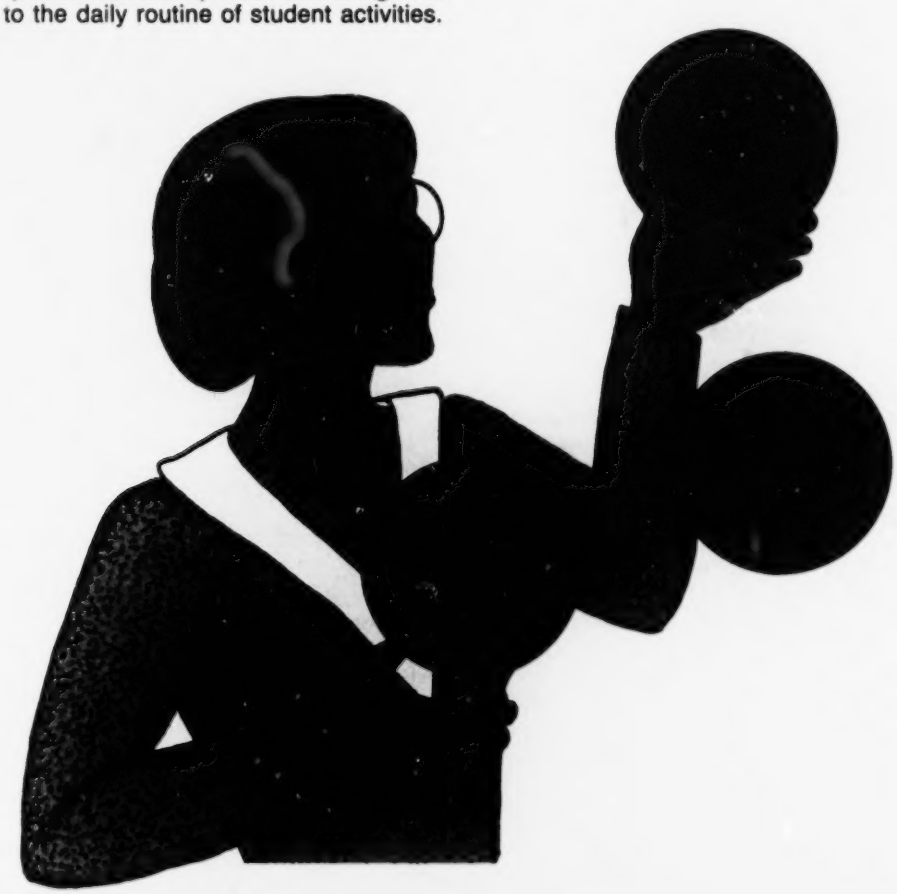
In a CBE program, the role of the instructor becomes that of a resource person. The function of the resource person is to facilitate, advise, evaluate, and dispense information. Although these functions are also shared by teachers in conventional programs, the manner in which they are performed and the emphasis they receive are different in CBE.

Two of the most important tasks of the resource person are to manage instruction and to manage student performance assessment. Given the different daily routines of the CBE program, the tasks cannot be performed in conventional ways. The resource person must adapt his/her management routines to the daily routine of student activities.

This module is designed to give you skill in managing the daily routines of a CBE program. Its information and practice activities will assist you in assuming the role of resource person and in managing instruction and student assessment in your CBE program.

A basic assumption of this module is that you have already designed and set up the major framework of your CBE program management system (refer to the diagram on p. 2 to see how this module relates to the other modules in Category K). Now you must make this system work smoothly and routinely.

You may wish to take this module and Module K-3, *Organize Your Class and Lab to Install CBE*, at the same time. Both modules contain an activity in which you observe certain aspects of a vocational program and develop a plan to make these aspects more compatible with a CBE approach. It may thus be most efficient to complete these two activities simultaneously.



ABOUT THIS MODULE

Objectives

Terminal Objective: In an actual teaching situation, manage the daily routines of your CBE program. Your performance will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 55–56 (*Learning Experience V*).

Enabling Objectives:

1. After completing the required reading, demonstrate knowledge of the unique factors involved in managing the daily routines of a CBE program (*Learning Experience I*).
2. After completing the required reading, explain how the teachers described in given case situations could solve the instructional management problems they are encountering in their CBE programs (*Learning Experience II*).
3. After completing the required reading, critique the performance of the teacher described in a given case study in managing student performance assessment in a CBE program (*Learning Experience III*).
4. Given the opportunity to observe and assess the techniques used to manage the daily routines of a vocational program, develop a plan for making those techniques more compatible with a CBE approach (*Learning Experience IV*).

Prerequisites

The modules in Category K are **not** designed for the prospective teacher with no prior training and/or experience. They assume that you have achieved a minimal level of **content knowledge** in your occupational specialty and **skill** in the core teacher competencies of instructional planning, execution, and evaluation. They then build on or expand that knowledge and skill level, specifically in terms of implementing competency-based education.

In addition, to complete this module, you should have knowledge of the essential elements and facilitating characteristics of CBE. If you do not already meet this requirement, meet with your resource person to determine what method you will use to do so. One option is to complete the information and practice activities in the following module:

- *Prepare Yourself for CBE,* Module K-1

Resources

A list of the outside resources that supplement those contained within the module follows. Check with your resource person (1) to determine the availability and the location of these resources, (2) to locate additional references in your occupational specialty, and (3) to get assistance in setting up activities with peers or observations of skilled teachers, if necessary. Your resource person may also be contacted if you have any difficulty with directions or in assessing your progress at any time.

Learning Experience I

Optional

Reference: Walejko, Charles. "Managing CBVE in the Classroom." *American Vocational Journal* (December 1977): 34–37.

Reference: Harrington, C. Tracy, and Fagan, R.L. "Key to Managing Competency-Based Education, Part Five: Evaluating and Managing Competency-Based Instruction." *Florida Vocational Journal* (June 1977): 26–32.

A resource person whom you can interview about the role of the resource person in a competency- or performance-based instructional program.

Learning Experience II

Optional

An operating CBE program in your occupational area that you can visit to observe the management of daily routines.

Learning Experience III

No outside resources

Learning Experience IV

Required

A vocational program in your occupational specialty that you can visit to observe and assess the techniques used to manage daily routines.

A resource person to evaluate your competency in developing a plan for making the techniques used to manage daily routines more compatible with a CBE approach.

Learning Experience V

Required

An actual teaching situation in which you can manage the daily routines of your CBE program.

A resource person to assess your competency in managing the daily routines of your CBE program.

General Information

For information about the general organization of each performance-based teacher education (PBTE) module, general procedures for its use, and terminology that is common to all the modules, see About Using the National Center's PBTE Modules on the inside back cover. For more in-depth information on how to use the modules in teacher/trainer education programs, you may wish to refer to three related documents:

The *Student Guide to Using Performance-Based Teacher Education Materials* is designed to help orient preservice and inservice teachers and occupational trainers to PBTE in general and to the PBTE materials.

The *Resource Person Guide to Using Performance-Based Teacher Education Materials* can help prospective resource persons to guide and assist preservice and inservice teachers and occupational trainers in the development of professional teaching competencies through use of the PBTE modules. It also includes lists of all the module competencies, as well as a listing of the supplementary resources and the addresses where they can be obtained.

The *Guide to the Implementation of Performance-Based Teacher Education* is designed to help those who will administer the PBTE program. It contains answers to implementation questions, possible solutions to problems, and alternative courses of action.

NOTES

Learning Experience I

OVERVIEW

After completing the required reading, demonstrate knowledge of the unique factors involved in managing the daily routines of a CBE program.

You will be reading the information sheet, Management Skills for CBE, pp. 8–11.

You may wish to read one or both of the following supplementary references: Walejko, "Managing CBVE in the Classroom," *American Vocational Journal;* and/or Harrington and Fagan, "Key to Managing Competency-Based Education, Part Five: Evaluating and Managing Competency-Based Instruction," *Florida Vocational Journal.*

You may wish to interview your own PBTE resource person about the role of the resource person in a competency/performance-based instructional program.

You will be demonstrating knowledge of the unique factors involved in managing the daily routines of a CBE program by completing the Self-Check, pp. 12–14.

You will be evaluating your competency by comparing your completed Self-Check with the Model Answers, pp. 15–16.

Activity 1

The daily routines of a CBE program are different from those of a conventional program. For information on how those routines are different and what skills are needed to manage them, read the following information sheet.

MANAGEMENT SKILLS FOR CBE

You will recall the essential elements of competency-based education (CBE): The content of a CBE program is based on rigorously identified and locally verified occupational competencies. Students ideally achieve these competencies at their own rate, using activities and materials designed to fit their own learning styles. Actual performance of these competencies is the ultimate measure of achievement. And finally, specific criteria for successful achievement of each competency are carefully identified in advance.

To put these essential elements, or principles, into operation, instruction is largely individualized in a CBE program—neither group-based nor group-paced. Learning experiences are guided by frequent feedback and are, to a considerable extent, field-centered.

Management Demands in CBE

To implement these essential elements and facilitating characteristics, you need daily routines that are quite different from those of conventional programs. Instruction in a CBE program is designed to meet the varying needs, interests, abilities, learning styles, career goals, and occupational skill levels of individual students, and students are allowed to work at their own pace.

These factors point to the need for many **diverse activities** to be included in the instructional program—activities that all focus on the primary goal of the program: individual student achievement of all specified competencies.

But providing diverse activities can present some management concerns. At any given instructional moment, students may have a multitude of needs to be met. Some students may need to have their laboratory work supervised. Others may want to get started on new learning packages. One student may want to arrange a field-site visit. Several might have questions about particular learning activities.

Two students may be ready for you to observe and assess their performance of a required competency. And a new student might need to be oriented to the program and helped in selecting the appropriate competencies for his/her training program. This multiplicity of needs cannot be met unless you use some special skills in managing your CBE program.

Flexibility is a key to successfully managing the demands of a CBE program. You must avoid the temptation to cope with these varied demands by reimposing a lock-step organization, in which all students complete learning packages together, according to a single schedule, with group instruction and group testing.

Granted, a lock-step approach is more easily managed, but it will also cause you to lose a great deal of the value of CBE. Instead, you should be prepared to meet the demands of your CBE program by developing the flexibility needed to work with students who are involved in varied learning activities.

In a CBE program, the **role of the student** is also different from that in a conventional, group-paced program. Students have increased independence and responsibility for their own learning. As part of this added responsibility, students must be able to obtain, use, care for, and properly replace learning materials, tools, equipment, and supplies. Hence, you will need management procedures that allow and encourage student access to learning resources.

You must also manage **student assessment and feedback** differently. In conventional occupational programs, assessment often relies heavily on group testing of skills and knowledge through paper-and-pencil tests.

The CBE approach, however, usually demands that you conduct individual student assessments—made when the student feels that he/she is ready to be assessed, rather than at a time convenient to you or dictated by a group schedule. Furthermore, although knowledge and attitudes are taken into account, the focus is on assessing actual performance of competencies.

Student feedback must also be provided on an individual basis after performance assessments and during guided practice activities. In a CBE program, you must be conscious of the need to provide frequent and regular student feedback, both within the instructional materials and through personal contact.

Meeting the Management Demands in CBE

Given the management demands described, the question you might now be asking is, What must I do in order to cope with the unique management demands of a CBE program? In any occupational program area, a smooth-running, successful program depends a great deal on the organizational and management capabilities of the instructor.

Fortunately, vocational-technical instructors have for years had experience in managing fairly complicated instructional situations. They have taught a variety of skills, to a variety of students, using a variety of equipment and instructional techniques.

You can build upon your already successful management techniques to ensure the smooth operation of your CBE program. Yet, while you can make use of many of your existing management skills, your overall instructional role will be different in a CBE program, and the management skills needed will change accordingly.

The role you play is that of **resource person**. The resource person in a CBE program performs the same functions as the instructor in a conventional program. However, the resource person performs those functions in a different manner, as dictated by the different daily routines of CBE. Furthermore, the different daily routines change the emphasis put on the functions performed by the instructor.

The resource person as facilitator. One function of occupational instructors has always been to facilitate student learning. One task involved in this function is **assembling resources**—all the numerous resources required for students to learn, including print and nonprint instructional materials, tools, equipment, supplies, consumables, outside subject matter experts, and so on.

As a resource person in a CBE program, you must provide sufficient materials and equipment so that student progress is not slowed or stopped unnecessarily. You need to be able to anticipate student resource needs and see that such needs are met whenever possible. With students moving through personalized programs at varying rates, providing the resources needed by each student will require special attention.

Facilitating learning also involves **managing and supervising the use of the learning resources**. And once again, because of the different daily routines in a CBE program, the function of facilitator will be performed differently than in a conventional program and assumes even greater importance.

In conventional occupational programs, instructors supervise the use of potentially hazardous equipment. They use various systems to ensure that if 15 ohmmeters were checked out for an activity, 15 were checked back in. They schedule the use of facilities, as necessary. They monitor the level of supplies and consumables to ensure that students have what they need in order to learn. Record keeping, too, is an important part of management and supervision.

In a CBE program, many of these same management/supervision tasks apply. In addition, however, as you manage the learning process for students, you will need to know—at all times—the status and progress of each student in the program. You will need to know the learning resources that are going to be required by each student in the immediate future.

Because resources in a CBE program are used daily, it is vital that storage, access, and use be controlled. Systematic management can ensure that you have your materials ready in advance of the need and in sufficient quantities to last throughout the budget year.

Thus, you will need to have and maintain a record-keeping system that provides you with accurate and up-to-date information of these types. This is vitally important to the success of a CBE program. Furthermore, your record keeping will be a **daily** activity—and necessity. How else could you keep track of different students working on different activities—involving different resources—at different times?

As a resource person, you must use an organized method of collecting, storing, and arranging information to help make informed decisions about the program, about each individual student progressing through the program, and about the availability of required resources. Depending on your situation, your system may range from a simple, manual system to a sophisticated computerized management information system.

A third facilitation function in a CBE program involves **scheduling the use of learning resources**. This can include scheduling activities, materials, tools, and equipment. Because students will be working on different activities, at the same time, you must be able to effectively schedule the available time, resources, and facilities so as to enable each student to progress satisfactorily.

The resource person as advisor. Traditionally, all vocational-technical instructors advise and counsel their students. Teachers share their professional experience and judgment with students who, themselves, hope to become practitioners. Personal experience, wisdom, and advice are often shared as well, as rapport develops between teacher and students.

The function of advising, like that of facilitating, is both different and more important in the daily routines of a CBE program. Since students assume greater responsibility for their own learning in CBE, their own motivation and sense of responsibility become crucial to success. Equally important, therefore, is the resource person's use of counseling skills in helping students develop motivation and self-responsibility.

Skillful counseling and advising are, furthermore, more often in demand, because students need guidance at different points in a self-paced, individualized instructional program. At the same point in time, one student may need assistance in selecting the next competency to work on; another, advice concerning appropriate learning activities; and still another, counseling after a performance assessment activity.

The resource person as evaluator. Evaluating student progress is, once again, a standard part of teaching. Occupational instructors assess students' knowledge, attitudes, and performance in any program. Again, however, the different daily routines of a CBE program may change both the manner and importance of evaluating student progress.

First, CBE uses performance as the measure of competence. This means that paper-and-pencil testing becomes less important in a CBE program. The resource person in a CBE program rightly relies much more heavily on performance testing. In other words, the best way to determine whether students can measure dry ingredients, gap a spark plug, or weld a tee joint is to have them perform the task. Their success is judged according to criteria that reflect industry standards for the task.

Second, students working at their own rate will need to be evaluated on different skills at different times. In a CBE program, group testing is the rare exception rather than the rule. Facilitating this individual assessment will become very important—scheduling the time and resources needed, having at hand the required criterion-referenced instruments, keeping appropriate records of assessment results, and so on.

Third, evaluation in a CBE program should always be followed, as soon as possible, by the provision of student feedback. Because learning is individualized and students have more responsibility for their own learning, providing frequent and timely feedback is essential. Feedback allows you to advise and counsel students on their general progress, the competencies they should work on next, and points in their performance that need to be improved and the means for doing so.

The resource person as dispenser of information. Many present-day vocational-technical teachers see dispensing information as their primary function. The daily routines of many conventional programs reinforce this view. All students sit together in one group as the instructor presents an illustrated talk or demonstrates a manipulative skill. Negative attitudes toward CBE often arise from a fear that dispensing information is **not** a function of the teacher in CBE.

This fear, however, is not justified. Dispensing information is, if anything, a more critical function of the resource person in CBE than of the conventional occupational instructor. How can that be, you ask? In CBE, dispensing of routine information is the job of the instructional materials; instead of listening to a lecture or watching a live demonstration, students are likely to read an instruction sheet or view a videotape. What dispensing of information remains for the resource person?

What remains for the resource person is the most important and demanding—and fulfilling—dispensing of information. Picture this scene. You are a resource person in a CBE program. Three students are approaching you at the same time. Each has a puzzled look and a different learning package in hand. You are going to have to answer questions concerning three different competencies. You are going to have to dispense information, quickly and accurately.

Each student will need to have his/her question answered in order to understand, to learn, to make progress. This is important.

You will have to tap your knowledge and experience, with no prior warning, in three different areas. To do what needs to be done, you must be an absolute master of your subject matter. In this kind of situation, you can't refresh your memory by boning up the night before. This is demanding, as well as challenging.

If you can help all three students, you can feel justifiably proud of yourself. This is fulfilling.

The Result of Management

The results of good management—careful, appropriate, and conscientious—are vital to the CBE program. With good management, you can maintain an ordered, safe, yet flexible learning environment. This environment can be as close as is practical to actual job conditions. Students can assume at least some responsibility for their own actions, as they will in the world of work. They can work on their own, knowing that they have the trust, support, and help of an expert practitioner, as they will in the world of work.

One final management concern will be to safeguard these results. You will need to monitor your learning environment to ensure that it is—and remains—ordered, safe, yet flexible. The need to evaluate your management procedures and the results of those procedures is great.

Evaluating management processes and products is not new to CBE, of course. Program evaluation is, once again, a standard part of good teaching. However, the increased importance of management in CBE makes its evaluation more important as well.

You may wish to read one or both of the following supplementary references: Walejko, "Managing CBVE in the Classroom," *American Vocational Journal;* and/or Harrington and Fagan, "Key to Managing Competency-Based Education, Part Five: Evaluating and Managing Competency-Based Instruction," *Florida Vocational Journal.* These two journal articles address management and evaluation concerns in operating a CBE program.

You may wish to interview your resource person about the role of the resource person in a competency/performance-based program. Although your own resource person most likely functions in a performance-based teacher education or competency-based staff development program, his/her role is nonetheless very similar to that of the resource person in a secondary or postsecondary CBE program.

As you interview your resource person, you may wish to concentrate on how he/she performs the four functions of facilitating, advising, evaluating, and dispensing information.

The following items check your comprehension of the material in the information sheet, Management Skills for CBE, pp. 8–11. Each of the four items requires a short, essay-type response. Please respond fully, but briefly, to each item.

SELF-CHECK

1. Assume that you looked in the door of an occupational program in which a teacher was using the CBE approach. How would the activities in which the students are engaged differ from those of a conventional program?

2. How does the role of the teacher in a CBE program change from that of a teacher in a conventional program?

3. What is the connection between (a) the essential elements and facilitating characteristics of CBE and (b) the change in student activities and the teacher's role in CBE?

4. What implications do your responses to the first three items have for the management skills needed to operate a CBE program?

Compare your written responses to the self-check items with the model answers given below. Your responses need not exactly duplicate the model responses; however, you should have covered the same **major** points.

MODEL ANSWERS

1. The activities of the students in the CBE program would, in many ways, differ greatly from those in a conventional program. The most obvious difference is that students would not all be engaged in the same activity at once. You could, possibly, see as many different activities going on as there are students in the room.

   In all probability, some students would be working alone. Others might be working together in small-group activities. Some might be involved in various information activities (e.g., reading instruction sheets in learning packages, listening to audiotapes, viewing videotapes, receiving a brief mini-lecture from the resource person).

   Several would likely be engaged in practice or skill-building activities at work stations. Some might be involved in problem-solving or project work. One or two might be having their performance of a competency assessed by the resource person or a designated aide.

   In one sense, these activities are not different from those in a conventional program. All the activities described probably occur in conventional programs at some time or another. The vital difference, however, is that in conventional programs, whole-class, large-group activities are the rule; in CBE programs, such activities are the exception.

2. Just as with student activities, the role of the teacher in a CBE program both **does** and **does not** change from that in a conventional program. The role of the teacher in CBE is properly that of **resource person**. The change from teacher to resource person is primarily one of emphasis, however.

   The resource person in a CBE program has essentially the same functions as the teacher in a conventional program. He or she facilitates, advises or counsels, evaluates, and dispenses information. The difference is the way in which these functions are performed and the importance they assume in the overall role.

   In a conventional program, the teacher very likely facilitates the work of a larger group of students (probably the entire class), all engaged in the same activity at one time. The same would apply to the function of advising and evaluating.

   In CBE, the resource person does considerably more facilitating on a daily basis. He/she must make available the entire range of learning resources required for different students working on different activities at the same time. The resource person might well have to supply resources required for students working on half a dozen different tasks.

   The function of dispensing information, likewise, changes. The teacher in a conventional program usually relies heavily on personally dispensing information to all students, through group lectures or demonstrations.

   Students in CBE, however, get this kind of routine information from their instructional materials. The resource person is much more likely to work with students individually or in small groups, as the need arises—when students have a specific question and come to the resource person for an answer, for example.

3. The changes in both student activities and the role of the teacher in CBE arise from the implementation of the essential elements and facilitating characteristics of CBE.

   According to these elements and characteristics, program content is based on carefully identified and locally verified tasks required of workers on the job. Performance of the tasks is the measure of competence. The focus of program instructional activities is on enabling the individual student to develop competence in these tasks, working (ideally) at his/her own rate, using activities geared to his/her own learning strengths.

   It is because of these principles that students in CBE programs work on different activities, at different times, using different materials. One student

finishes work on Task 1 in two days and goes on to Task 2. Another student spends three days on Task 1 and then goes on to work on Task 4.

Or, both students could work on the same task using different materials—a student who reads well using print materials; another, who doesn't read as well, using nonprint materials.

All in all, the principles of CBE mean, in practice, that instruction accommodates varying student needs, abilities, and goals. This cannot be accomplished using lock-step, whole-class, large-group instruction—hence, different students do different things at different times.

4. Because instruction is individualized and self-paced and because of the nature of the roles of student and instructor in a CBE program, management is both more crucial and more complex. The resource person must meet the resource and information needs of students working on many different learning tasks. This requires careful management.

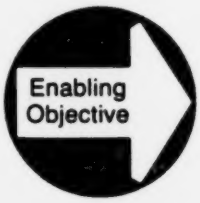
   In addition, the resource person must keep track of the many learning resources involved and the progress being made by students pursuing individual learning plans. Again, careful management is required.

   Maintaining **control** over all this activity and all these resources, while also maintaining a **flexible** learning environment, is a challenging management task indeed.

Level of Performance: Your written responses to the self-check items should have covered the same **major** points as the model answers. If you missed some points or have questions about any additional points you made, review the material in the information sheet, Management Skills for CBE, pp. 8–11, or check with your resource person if necessary.

Learning Experience II

OVERVIEW



After completing the required reading, explain how the teachers described in given case situations could solve the instructional management problems they are encountering in their CBE programs.

You will be reading the information sheet, Managing Instruction in CBE, pp. 18–31.

You may wish to visit an operating CBE program in your occupational area to observe the management of daily routines.

You will be reading the Case Situations, pp. 32–34, and explaining how the teachers described could solve the instructional management problems they are encountering in their CBE programs.

You will be evaluating your competency in explaining how the teachers could solve their instructional management problems by comparing your completed responses with the Model Responses, pp. 35–36.

Activity 1

One "routine" that requires management in CBE is instruction. For information on how you can manage instruction, acting in your role as resource person, read the following information sheet.

MANAGING INSTRUCTION IN CBE

Instruction in CBE places heavy management demands on the instructor because CBE places such a heavy reliance on individualized and personalized instruction to make its principles work. As a result, there is a variety of activity to manage. Before going any further, let's look at those two terms—individualized instruction and personalized instruction—a little more closely.

The term *individualized instruction* is often misunderstood. What it means is that students may take any number of routes to reach the same goal: achieving an occupational competency. Students may use independent study, small-group and large-group work, audiovisual materials, or any other mode—it doesn't really matter as long as they learn.

The learning mode is selected with your aid and is determined by the student's needs, interests, and capabilities. Individualized instruction, it should be pointed out, does **not** imply simply securing a learning package and working in isolation.

On the other hand, the term *personalized instruction* refers not so much to the mode of learning, but to the students' own personal goals. An interior designer, for example, may enter a horticulture program only to gain skill in selecting and placing indoor plants in homes and offices. Another horticulture student, however, may want to gain skill in running an entire nursery.

A well-managed CBE program could accommodate the goals of both these students, personalizing instruction by selecting appropriate competencies for them to achieve and developing learning experiences to meet their needs.

Selecting Instructional and Cognitive Testing Techniques

In order to individualize and personalize instruction, skill in using a wide range of teaching techniques is a must in CBE. Successful instructors in CBE programs employ many different learning activities and teaching strategies to help students attain program competencies. This helps to make the learning process more varied and interesting and to satisfy individual learning needs.

Large-group instruction. Nowhere is it written that large-group instruction is forbidden in an individualized CBE program. In fact, there may be many occasions when it is beneficial for the total group to get together for special instruction.

For example, you might want your entire class to hear a personnel manager discuss job opportunities or to see a special demonstration by a subject matter expert. Or a lesson on a particularly difficult related topic could be presented on a large-group basis when most students are near that point in their schedule of competencies. Or a field trip might be conducted for the entire group.

In these and many other situations, large-group activities can be efficient in presenting instruction, can take advantage of unusual opportunities for good learning experiences, can add variety to the students' work, and can build motivation and morale. It will be up to you to determine when a large-group activity is needed, to prepare for the activity, and then to schedule it so it will be most valuable for students who may be at a number of points in the instructional program.

Small-group instruction. The idea of having a small number of students (perhaps two to five) work together should not be neglected in CBE programs. Small-group instruction has many of the same advantages as large-group instruction and may be practically indispensible for learning some skills.

For example, simulating actual job situations and developing interpersonal skills are naturals for small-group work. In a bank teller program, students can make change for each other. Skills for a receptionist that involve dealing with clients can be practiced using peers.

In health occupations, some students can take the role of patients while others perform the required procedures. Complex skills, like those involved in technical planning or preparing reports, might be more readily learned by students working together and sharing ideas.

In most programs, the students themselves will tend to form informal groups as needed. In managing more structured small-group activities, you must discern the need for such groupings, help to organize and direct the groups, perhaps participate as an observer or evaluator in group activities, and disband a group when its purpose is accomplished.

Tutoring. The demands of instruction in CBE are such that instructional assistants—tutors—can be very helpful. Tutors can be used to provide one-to-one instruction in many occupational fields. Advanced vocational-technical students, teacher aides, or even community volunteers can serve as tutors. Such individuals may be able to talk to students in "their own language"—perhaps communicating more effectively than you yourself could do in some cases.

The use of advanced students as tutors has some interesting possibilities in that, for some occupations, leadership and instructional skills are required competencies. Thus, the advanced student can be developing these skills, reinforcing his or her own knowledge of the subject being tutored, helping less advanced students, and helping to manage instruction, all at the same time.

As resource person, you need to arrange for the tutors, and you may also need to prepare them for their task by providing a short instructional program, either personally or in prepackaged form.

Project work. Many vocational instructors incorporate projects in the instructional program to provide real or simulated occupational experience. A project may be completed by individual students (e.g., an individual in an architectural drafting program may design an entrance gate for the college). Or a project may be the responsibility of an entire class (e.g., a practical nursing class may set up a booth at a shopping mall to check blood pressure or give a glaucoma test for the public).

Activities such as these give students a taste of real job situations and provide them with an opportunity to practice advanced skills. Sometimes, you can even use these situations for final performance assessments.

It is important to note that in a CBE program, every project must be carefully selected and planned to allow students to develop proficiency in the specified program competencies—not simply to provide students with interesting activities or to provide a community service. (The complexities of managing "live work" in vocational-technical programs is discussed later in the information sheet.)

Use of audiovisuals. There is a wealth of audiovisual instructional materials available today in most occupational areas: slides, tapes, slide/tapes, filmstrips, films, videotapes, and so on. These may be available from commercial producers of audiovisual instructional materials, from your state department, or from educational labs and centers. Firms specializing in occupational supplies and equipment may also have relevant audiovisual materials, designed to promote their products.

All these materials can add desirable variety to learning activities, provide for a range of student learning styles, assist poor or reluctant readers, and present instruction effectively. A student can stop a slide/tape to examine one slide more closely, replay a section of a videotaped demonstration until the process is understood, or increase comprehension by listening to an audiocassette while reading the same thing on a printed page.

Instructors are finding that they can produce such materials relatively easily and that it saves them a great deal of work in day-to-day instruction. Any of today's inexpensive, easy-to-operate cameras can be used to make picture books of technical processes. With a 35mm camera and a small cassette recorder, you can produce color slide presentations with a taped narration.

You can also produce audiotapes of student reading assignments—material from textbooks or learning packages (don't worry about not sounding like a professional radio announcer; students appreciate hearing the voice of someone they know). Each skill demonstration can be put on videotape to provide instruction just when a student is ready to work on a specific competency. Just prepare your usual good demonstration, have a media specialist come to the lab to tape it, and then add a title.

Well-developed CBE programs make tremendous use of audiovisual materials; they help make individualized, self-paced instruction possible. A number of established programs are now to the point of using this means almost exclusively to deliver routine instruction. It may not be feasible to provide a complete audiovisual library for each competency all at once, of course, but over a period of time, this seems the way to go.

Simulation activities in learning labs. As in conventional programs, many teachers use work stations and simulation activities for some skill-development and practice activities. For example, a competency such as *Rebuild disc and drum brakes* is better learned at a work station or on a nonfunctioning vehicle than on a customer's valuable automobile.

Similarly, it is more practical to use a large sandbox in practicing control of soil erosion than an open field. It is a lot safer to learn the basic skills of truck driving in a simulator than on the streets.

Computer-assisted instruction. Another method of providing essential background information, practice activities, and even performance tests is the use of computers. Computer-assisted instruction (CAI) is particularly useful in individualized instruction because of the versatility of the computer.

For example, you might use a computer to provide background information, with student self-checks and instant feedback built into the program. A variety of practice or skill-development activities might be put on the computer to provide options to learners. As an instructional tool, a computer works very well for teaching easy-to-learn tasks or tasks that require repetition, drill, and practice.

In a clerical occupations program, a task of this type might be *Read computer printouts.* The computer could be programmed to provide step-by-step procedures for reading computer printouts. Sample printouts, with questions requiring student responses, could be included, along with feedback to the student concerning the accuracy of his/her responses. Recycling or alternate activities could be put on the computer as necessary, and final performance assessment activities could be included as well.

In a food services program, a competency such as *Convert recipe to larger or smaller amounts,* involving adjusting the quantities of recipe components, could be taught through CAI. In a surveying technology program, a competency such as *Compute land areas* is another example of a competency well suited to CAI.

Developing CAI will probably require technical assistance from a computer specialist in your institution or district. More and more schools are installing microcomputers for record-keeping and management purposes. However, the instructional capabilities of the computer in vocational-technical education are largely unknown at this time, due to their limited use for this purpose.

Nevertheless, with your ideas and the technical know-how of a programmer or specialist, you might just find CAI to be an invaluable tool in your CBE program.

Computer-assisted testing. There is one use of the computer which is not nearly as complex to program as CAI but which may be very helpful to you and your students—and incidentally can be a significant first step in beginning to apply this tool.

Typically, educational programs have built into them a series of knowledge tests (e.g., on related and theoretical information) that students are required to pass before they are allowed to move on to hands-on practice and final performance tests. The instructor prepares the written tests, keeps them in a locked file until students are ready, and then grades the tests before the students go on.

This testing approach can take a good deal of the instructor's time. Furthermore, there is always the possibility that a prepared test will become common knowledge among the students, thus defeating its purpose.

As an efficient alternative, you could prepare a bank of cognitive (knowledge) test items for each competency, as required, and enter the items into the computer. If so programmed, the computer can produce a unique test for each student by randomly selecting and sequencing items from its memory.

When a student is ready to take a knowledge test, he or she goes to the terminal, enters his/her name and the name of the test that is wanted, and the computer displays a selected group of items. The student responds to the displayed items, and the computer scores the test and enters the results in the student's record.

All this is accomplished with a minimal amount of effort on your part, and at the same time, it provides both a valid and reliable testing situation for the student and an essential management and record-keeping tool for you.

Providing Instruction for Students with Special/Exceptional Needs

The CBE approach can be especially effective in providing vocational-technical training for students who have special/exceptional needs (e.g., those who are gifted, physically handicapped, economically disadvantaged, or mentally retarded). Individualized instruction and personalized programs can make it possible to reach these students in a way not possible in conventional programs.

There is nothing fundamentally different about instructing students with special/exceptional needs in a CBE program. The same good teaching techniques apply.[1] There are, however, a couple of points related to assessment that are worth emphasizing.

When a student has special/exceptional needs, his or her program may include a selection of competencies that is quite different from that of other students in the class, depending on his/her capabilities and needs. Once a competency appears on the student's program, however, that student's performance should be assessed on the same basis as any other student, without special standards or "allowances" based on sympathy. You do no favors to the student (or to future employers, for that matter) by watering down the established criteria.

On the other hand, the checklist of performance criteria for the competency in question may require thoughtful interpretation. A student in a wheelchair, for example, may have to employ an unorthodox procedure to operate a machine or demonstrate a technique. Such variations should not affect final assessment as long as (1) the competency is performed at the accepted level, (2) the student and others are not subject to special hazards, and (3) significant time is not lost.

In some cases, a specific criterion may have to be designated "not applicable" if, because of special circumstances, a student cannot be expected to meet it. Whatever the situation, the overall rating of the competency should reflect the student's actual skill level.

Scheduling

The scheduling of diverse activities is a very important responsibility in the management of a CBE program. Scheduling is actually managing time. While the ideal form of CBE would provide an open-entry/open-exit program in which students would have an unlimited amount of time to learn, few CBE programs (or students) have the luxury of unlimited instructional time.

In most institutions, teachers must work within certain time constraints—class periods of certain lengths, semesters of so many weeks, and even programs of a fixed number of hours. For this reason, you must be an effective manager of time. That is, you must make the best use of the available time to help each student progress according to his/her individual learning plan.

Remember, in your role as resource person, you must be available to students who want to demonstrate their achievement of a program competency, who need supervision of their practice activities, who are ready to get started on a new learning package in the occupational series, or who need some counseling. You will also need to provide time for use of the resource center, for small- or large-group activities, and for tutoring, if needed.

With only a specific amount of time available, how can you ensure that all these diverse activities can occur and that the program operates smoothly? What is needed is an effective time-management plan.

The time-management plans typically used by instructors in CBE programs provide schedules of **activities** only. In other words, instead of scheduling students, you schedule activities, or times during which the activities could occur.

Students can then schedule themselves into activities. In the process, they have the opportunity to develop their own time-management skills (crucial employability skills), set their own pace through the program, and develop initiative and a sense of responsibility. Students should learn to work effectively within a schedule, much as they would on the job.

The type of time-management plan or daily schedule that you develop will, of course, depend on the organizational structure of your CBE program. For example, a teacher in a one-teacher program, with no aides or tutors, would probably need to schedule particular types of activities at specific times each day. In that way, he or she could help to avoid the frustrations of trying to be all things to all students at the same time.

Teachers in a team-teaching situation, on the other hand, could plan a daily schedule that allowed all types of activities to occur simultaneously, with each team member assigned to supervise certain of those activities. Or they might choose to have the team members rotate through responsibilities: supervising the resource center, conducting student assessments, guiding practice activities, and so on.

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1. To improve your skill in working with students with special/exceptional needs, you may wish to refer to the modules in Category L, particularly Module L-3, *Plan Instruction for Exceptional Students;* and L-7, *Use Instructional Techniques to Meet the Needs of Exceptional Students.*

Because student performance assessment is such a time-consuming part of your duties in a CBE program, other aspects of instruction could get neglected or delayed. Thus, you may want to schedule a specific part of your day for this activity and stick to it.

Sample 1 gives an example of a daily time schedule that might help you in developing your own schedule. Although it may not be exactly suitable for your situation, it does indicate the kinds of activities you might want to consider.

Whatever schedule you develop for your own program, you should seek student reaction to it. Once an agreed-upon schedule is in place, stick to it for a while. Give it ample opportunity to work, but do not hesitate to make modifications if the schedule proves unworkable. Your final schedule should allow you to meet all your responsibilities to the students in your program and help the students progress smoothly in meeting their goals.

Managing Resources

The materials and resources used in a CBE program are many, and they must be managed well or student progress can be seriously affected. Students will need individualized instructional materials, audiovisual materials, tools, and consumable supplies on a daily basis. You need to anticipate the resource needs of all students and provide a system that will allow students to have easy access to those materials. Furthermore, the system must be one that you can monitor easily.

Storage and distribution. In CBE programs, learning packages often are the primary resource for providing students with essential background information and learning activity directions for each program competency. The learning packages can be numerous (e.g., one for each competency) and voluminous.

Without an effective system for storing and distributing these materials, trying to use them can constitute a major source of frustration for your students. The learning packages need to be carefully kept in correct order and in good condition, and they must be readily available to both you and your students.

For new, unused learning packages, probably the best solution is to logically sequence and neatly label the stock of learning packages and then to keep them in file cabinets or another appropriate storage area.

For learning packages that are currently being used by students in the program, you might provide cabinets or wall-hung, "pigeon-hole" compartments, with a space assigned to each student. It is important for students to have an organized and secure place to store the learning packages they are using. Otherwise, there is a danger that they may lose or misplace their work and become discouraged.

Learning packages that have been completed by students can be stored temporarily in a cabinet or other suitable receptacle, ready for checking, for replacing consumable sheets, and for recycling into stock for future use.

A somewhat more elaborate system is to provide a file box for all the instructional materials needed for each competency (or cluster of competencies). A "pamphlet file box" (available from library supply houses) is ideal. If there are 150 competencies in the program, there could be 150 boxes.

The contents of each box would include a copy of the appropriate learning guide. It might also include copies of additional instruction sheets, manufacturers' specification sheets, journal articles, model samples of previous students' work, picture books—in short, anything that would help students achieve the competency. Large items (e.g., a slide/tape presentation) would have to be filed separately.

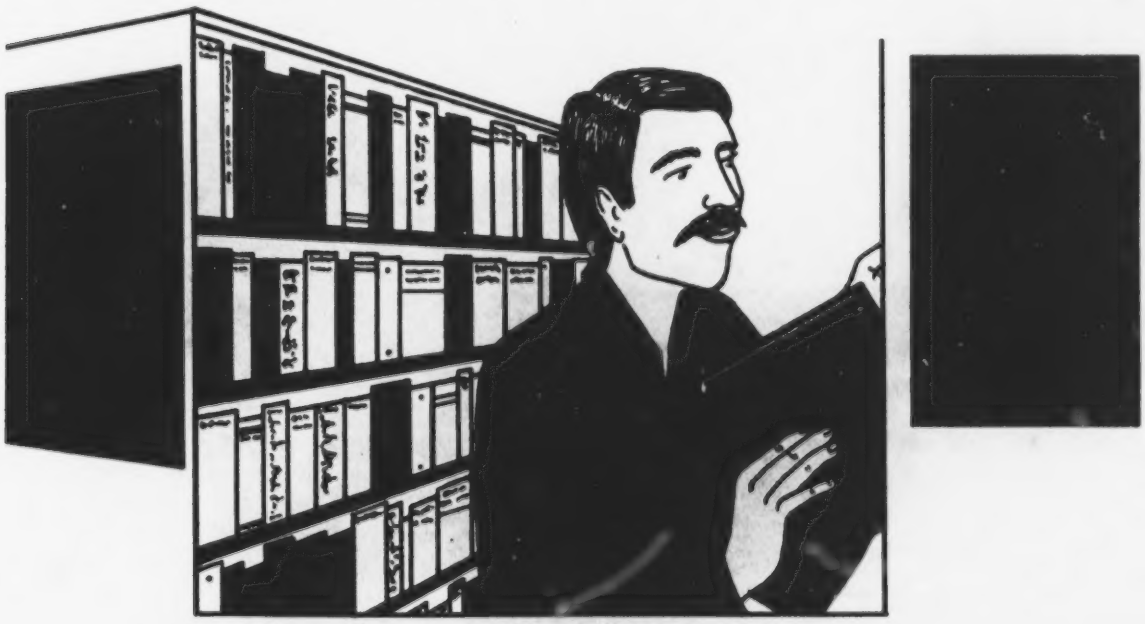
The file boxes should be clearly labeled by competency title and arranged on shelves (in the classroom, lab, or resource center) in the order in which the competencies appear on the program competency list. To make them easier to locate, the boxes can be organized by duty areas, or general areas of competency. Thus, when a student is ready to start work on a new competency, he or she can easily locate the appropriate box and find there all the ins ructional materials needed.

You can also use a simple rack to store learning packages that are in use, and a cardboard box to store those that have been completed. Your system doesn't need to be fancy, as long as it is systematic and it works. Samples 2, 3, and 4 may give you some ideas for storing instructional materials—learning packages, worksheets, test forms—that can be applied to your setting.

SAMPLE 1

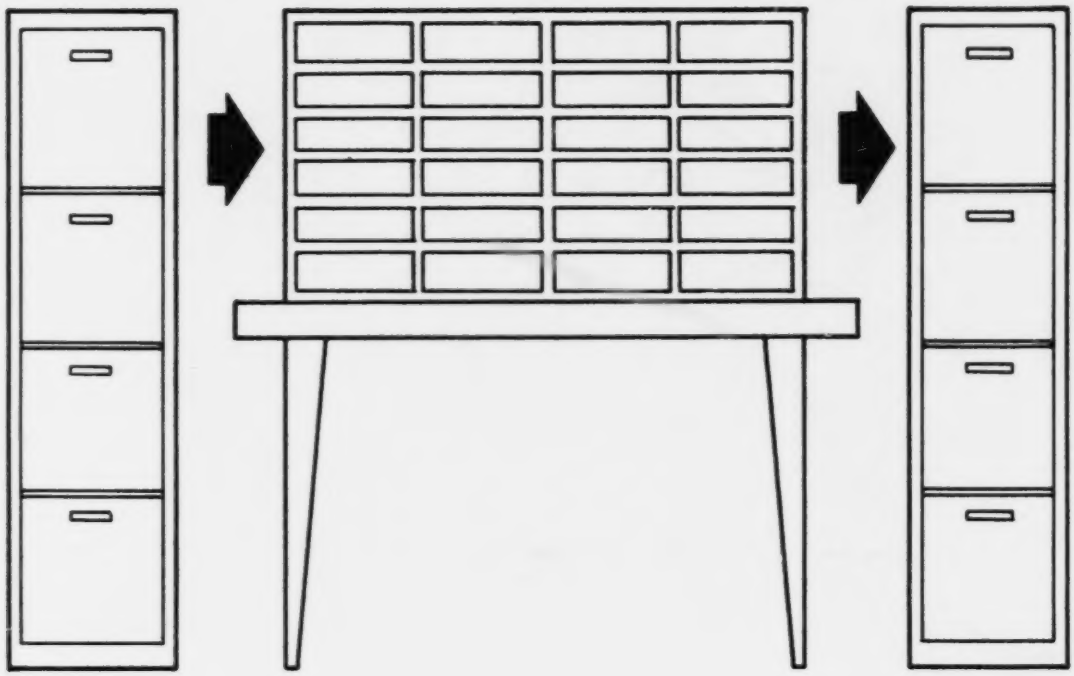
DAILY TIME SCHEDULE

8:00 - 8:30	Planning time
8:25 - 8:30	Students report
8:30 - 8:40	Attendance, announcements
8:40 - 9:00	Students sign up for performance tests
8:40 - 11:30	Learning guide request from office assistant
9:00 - 11:00	Students on task—instructor supervising tests and assisting students
10:00 - 10:15	Break
11:00 - 11:30	Student/instructor conference time
11:25 - 11:30	Students clean up, return resources and learning guides
11:30	Class change
11:30 - 11:50	Students sign up for performance tests
11:30 - 2:20	Learning guide request from office assistant
11:45 - 2:00	Students on task—instructor supervising tests and assisting students
12:30 - 1:00	Lunch
2:00 - 2:30	Student/instructor conference time
2:20 - 2:25	Students clean up, return resources and learning guides
2:25 - 2:30	Announcements, attendance
2:30 - 3:00	Instructor planning time



SAMPLE 2

INSTRUCTIONAL MATERIALS STORAGE: OPTION 1



File Cabinet #1
For storage of modules ready to be used

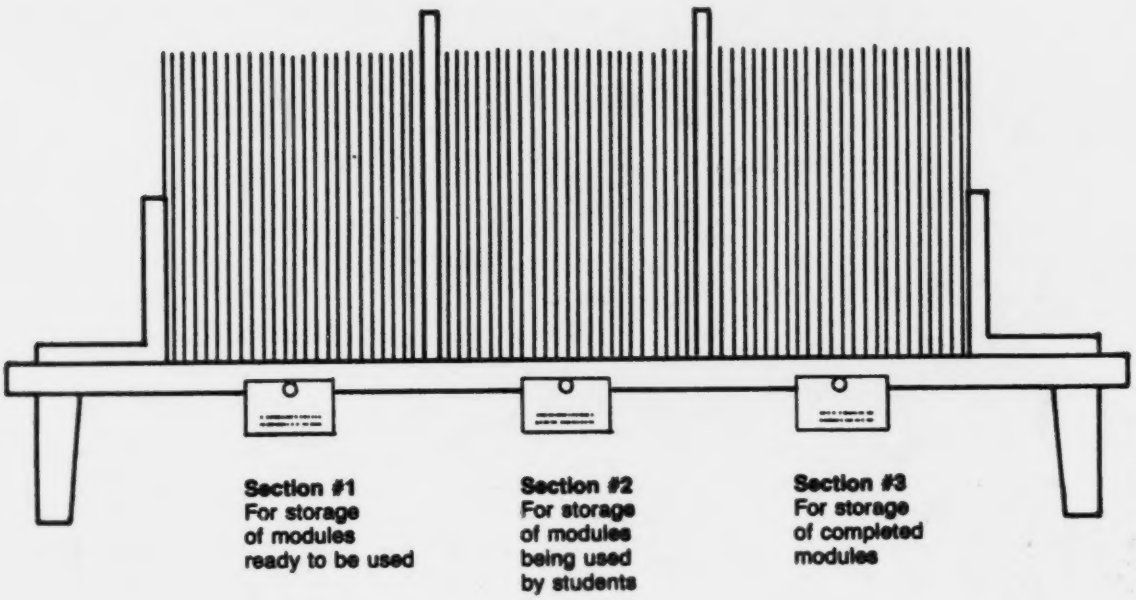
Wooden Cabinet
For storage of modules being used by students

File Cabinet #2
For storage of completed modules

SOURCE: *Managing Instruction* (Lexington, KY: Kentucky Department of Education, Bureau of Vocational Education, 1980), p. 109.

SAMPLE 3

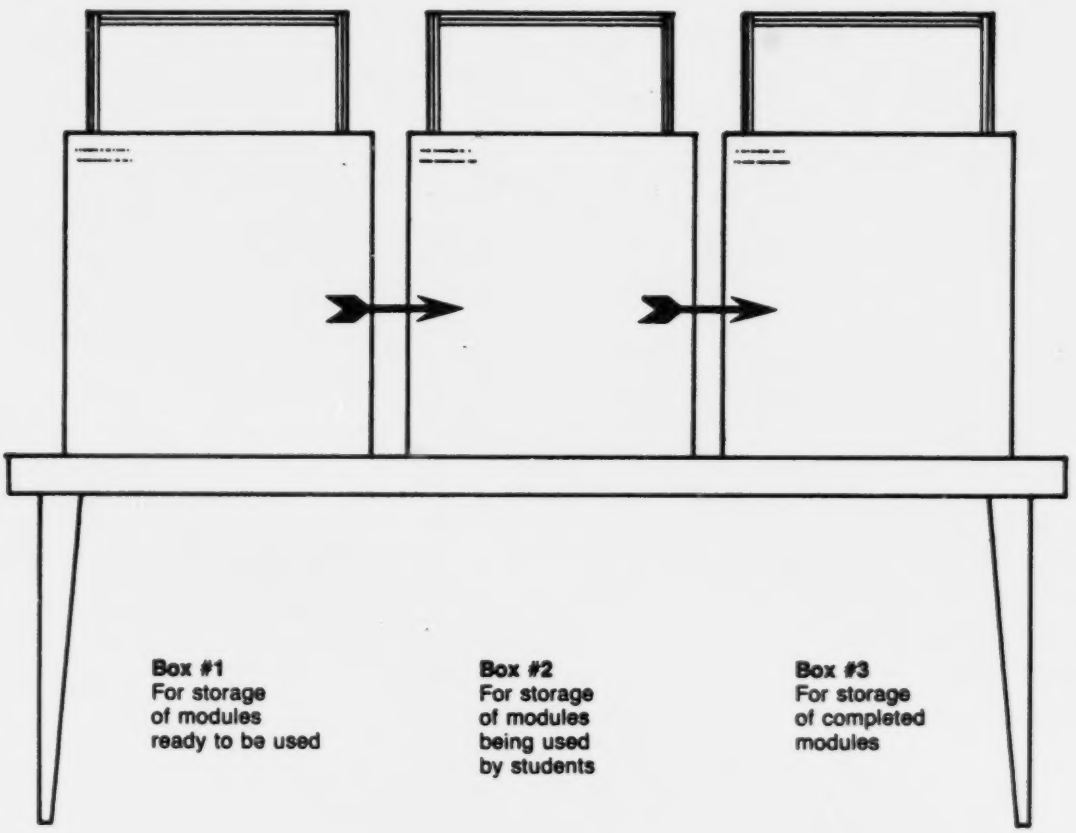
INSTRUCTIONAL MATERIALS STORAGE: OPTION 2



SOURCE: *Managing Instruction*, p. 109.

SAMPLE 4

INSTRUCTIONAL MATERIALS STORAGE: OPTION 3



SOURCE: *Managing Instruction*, p. 110.

In some occupational programs (e.g., diesel and heavy equipment mechanics), the nature of the learning activities and the environment in which they are carried out (greasy work stations, for instance) make reusing learning packages impractical. One solution to this problem is to have your learning packages printed in the school print shop and to sell them to students at cost.

In that case, individual student lockers could provide a secure location for the storage of in-progress materials. New learning packages could be kept in a storeroom in stacks. And tallies kept on the sides of storage compartments could be used to indicate when the supply is getting low, thus eliminating some of the need for time-consuming inventory counts.

Monitoring and inventorying. With students moving through the program at varying rates and using different paths, a variety of learning packages, tools, equipment, and supplies will constantly be in use. In general, therefore, daily monitoring of the storage and check-in/check-out systems you have developed is a must.

While this monitoring is primarily your responsibility, others can assist in the task. In programs where there is more than one instructor, the instructors can share monitoring and inventory responsibilities. If you are fortunate enough to have an aide, he or she could be assigned to monitoring check-out and check-in of resources. Students in the program can also share the responsibility for monitoring resources.

For example, in many programs students take turns serving as classroom/lab monitor. In automotive mechanics and other similar programs, students may work as a parts attendant or toolroom manager as part of their training programs. These positions can include materials check-in/check-out responsibilities.

Of course, monitoring and inventorying resources are not new to vocational education. Vocational-technical teachers have for years operated successful systems for controlling tool and supply inventories. Because tools, equipment, and supplies are not all needed at the same time by all students in an individualized program, however, you may be ordering and receiving supplies throughout the year. This situation requires smaller inventories, but it also requires constant monitoring and management to be effective.

Nevertheless, the simple forms and record-keeping systems traditionally used by vocational-technical instructors to keep up with the resources in their classrooms and labs can still do the job. Samples 5, 6, and 7 show simple, but adequate, daily sign-up sheets for student use in a CBE program.

In addition, it is recommended that you maintain a class progress chart that shows, on a daily basis, what competencies students are working on at present or will be attempting next. Then, if substitutions must be made because a resource is not available, you will have the time to arrange for possible alternatives.

By using forms such as these and daily monitoring the resources available, you can be prepared to meet students' resource needs. You can identify all the resources required as part of the learning packages currently in use. You can inspect any equipment students will be using. You can check to make sure that all required supplies are available. And you get from storage any special learning aids (e.g., models, mock-ups) that will help students complete the work of a learning package and acquire the requisite skill.

Managing the Resource Center

If your learning resources are kept in a resource center, you will certainly need to manage that resource center. There are many variations possible in how resource centers are set up and where they are located. Therefore, you will need to use your judgment and knowledge of your situation in determining what your own responsibilities will be for managing a resource center.

For example, your institution may have a single resource center serving all occupational areas. This resource center may have taken the place of the traditional library, combining the two functions.

If that is the case, you will probably have less responsibility for managing the resource center. There will likely be permanent resource personnel attached to the resource center, and it will be their responsibility to implement and monitor check-in/check-out systems for the learning resources and audiovisual equipment. Your own responsibility may be simply to act as an aide in the resource center during specified periods. This duty might be rotated among all teaching personnel.

If you maintain your own resource center or if there is a single resource center with no permanent resource personnel attached, your management responsibilities will be greater. You will need to develop and use various forms and systems to account for the resources contained in the center. (Those illustrated in samples 5, 6, and 7 can serve this purpose in your resource center.)

SAMPLE 5

LEARNING PACKAGE CHECK-OUT/CHECK-IN

Learning Package Number _____

Learning Package Title: _____

Date of check-out	Time	Name	Date of check-in	Time	Initials of monitor

SAMPLE 6

SIGN-UP SHEET FOR EQUIPMENT

Equipment: _____

Student Name	Competency	Date Needed	Hours Needed

SAMPLE 7

NONCONSUMABLE SUPPLIES CHECK-OUT/CHECK-IN

Description	Name of user	Time and date checked out	Time and date checked in	Condition	Initials of monitor

You will also need to monitor these systems on a regular basis. The systems become worthless if you don't **use them** to ensure that you have enough of the various learning resources your students need in their learning activities. Supplies (especially consumables) should be inventoried regularly, so that orders for additional supplies can be placed in time. Instructional materials and audiovisual equipment should be inspected when returned by students to determine whether they are in good condition.

You should consider using students, aides, or volunteers as monitors in your resource center. They can inventory supplies and inspect returned equipment for you. You might even want them to dispense materials as students request them and replace them in their correct location when they are returned. This helps to ensure that any given resource is where it should be, in usable condition, when it is needed.

If there is more than one instructor in your program, you might consider rotating responsibility for the resource center among instructors. This could be done on an hourly, daily, or even weekly schedule. Having an instructor always present in the resource center ensures that students can ask questions and receive guidance as necessary.

Supervising Students

Another concern closely related to managing resources or a resource center is supervising students. This is perhaps of more concern to secondary than postsecondary instructors.

In CBE programs, it is almost inevitable that some of your students will, at various times, be working in another part of the room or building, out of your sight. You will need to provide some kind of supervision for students in this situation. Your responsibility for students in your program—under your care—does not stop just because they are out of your line of vision.

On the other hand, supervising students and student activities is not just a negative matter. Students will need to be able to get assistance and guidance in their activities. They may have questions on the content of information activities. They may be unsure of the procedures in practice work.

As before, if there is more than one instructor in your program, the duty of supervising students in other locations can be rotated among the instructors. Resource center personnel can supervise students working in their area. Advanced students, aides, or volunteers assigned as resource center monitors can play a supervisory role.

If resource center personnel and monitors have some expertise in your content area, they may be able to assist students with questions as necessary. If not, you will need to make yourself available to students.

You might be able to do this by scheduling regular "drop-in" visits to the resource center or other location. You could let students know, for example, that you will visit the resource center every hour on the hour for ten minutes, to offer assistance as needed. If you do this, however, you will need to arrange supervision for the students who remain in your classroom or lab area while you are away.

Organizing and Managing Live Work

The term *live work* refers to work that is done for actual clients or customers. Many occupational programs—both conventional and competency-based—consider live work to be a valuable and integral part of the instruction. In cosmetology, for example, customers are scheduled for hairdressing and manicures; in auto mechanics, students repair customers' cars; in graphic arts and printing, design and printing jobs are done for the school and community.

The benefits of this type of activity are numerous. Students gain experience and practice in a variety of occupational tasks. Real problem-solving and diagnosis situations are posed. And the program gains the respect and goodwill of the school and community.

Unfortunately, there is also the possibility of problems. Unless you exert tight control, students may be exploited, you may end up doing a lot of customer work that students can't handle, the total instructional program may suffer, or a botched job done by an inexperienced student may create a great deal of ill will.

In a CBE program, the same benefits accrue and the same hazards exist, but careful management of live work on your part can maximize the first and minimize the second.

The main point is that live work must be organized solely to **aid instruction**. To overdraw the picture a bit, here is what has sometimes happened. A customer shows up at, let's say, the electronics lab door carrying a television set that is on the fritz and asks if it can be repaired in time for next Saturday's big game. The instructor says she'll try and sets the TV on a shelf.

Later, the instructor looks around for a likely student to do the job. A couple of advanced students are taken off their lab work and assigned to work on the TV. However, because the problem is intermittent, they can't locate the source of the trouble. The instructor then has to work on her own time or use class time to get the job done on time.

In a well-managed CBE program, this scenario must be turned entirely around. Customer work should involve occupational tasks the students need to perform for practice and experience, and live work must be available when students need it. In other words, the work is scheduled based on **student** needs; students are not scheduled to complete work based on customer needs.

To take an example from the farm mechanics shop, when a student is ready to demonstrate proficiency in, let's say, packing wheel bearings, then a tractor that needs its wheel bearings serviced should be brought into the shop. But to make this function efficiently, the instructor needs to be able to locate the needed jobs quickly and easily.

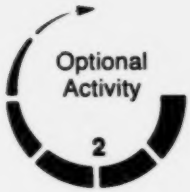
One way is to keep a file of potential live work. A specific time can be designated for clients to talk to you about the work they want done (perhaps Monday mornings). At that time, you can look each job over and make out a file card describing it. Then, when a student is ready to practice or demonstrate a certain competency, you can consult the file and get in touch with the client to set a date and time to bring in the job.

In some large programs, a paraprofessional or teacher's aide is assigned to schedule customer work for all areas. The instructors notify the aide about what jobs are needed, and the aide tracks down and schedules the work. The aide may consult a file, put up notices on the school or college bulletin board, or if necessary, advertise in the local paper until an appropriate job is found.

When live work is, in fact, scheduled in response to the student's instructional needs, the student is prepared for the job and goes right to work when it comes in. The chances of doing a really satisfactory job are increased. The student is involved in a genuine learning experience. And you are able to maintain a smoothly running instructional program.

It should be noted that this approach to live work requires good organization and perhaps a thick skin. No one, not even the local vocational director or college president, can be allowed to disrupt the system and get a personal job done at his/her own convenience (it is wise to get complete agreement on this when the system is set up).

Then, too, there may be some disgruntled customers who will have to change their habits. And it will take good contacts to ensure that a reservoir of suitable jobs is available. Nevertheless, instruction and student progress will surely be strengthened.



You may wish to visit an operating CBE program in your occupational area to observe the management of daily routines. Check with your resource person to identify an exemplary CBE program that you can visit. As you observe the routines of the program, try to answer the following questions:

- What instructional techniques are used?
- How are resources managed? The resource center?
- How is supervision provided for students not working in the immediate classroom/lab area?

The following case situations describe the problems encountered by four teachers in managing instruction in their CBE programs. Read each of the situations and **explain in writing** (1) the nature of the problem and (2) what that teacher should do to solve the problem.

CASE SITUATIONS

1. Mrs. Wellman, an instructor in the licensed practical nursing program, walked through the door of her laboratory. She was just returning from her scheduled visit to the resource center, where she had checked to see if students had questions or requests for assistance. Once inside the lab, she was quite upset to discover that students were using a pillow on one of the beds as a dart board and hypodermic needles as darts.

2. Mr. Hamilton, the livestock farming instructor, slammed the door of his supply room in disgust. Those students! Every time one of them used his "Visible Cow" model, parts of it turned up missing. Today, all four of the stomachs were gone—nowhere in sight. If only he knew who had been working on a competency involving the "Visible Cow" this morning!

3. Mr. Adams is an instructor in a secondary office assistant program. He has been using a role-playing technique with each individual student as part of the competency on applying for a job. He is getting very tired of CBE and the individual approach to teaching competencies—especially this role-playing over and over again.

4. The vocational supervisor has brought a visitor from the state department of education in to observe Ms. Darnell's competency-based home economics program. The students are working on their learning guides, helping each other on learning activities, and so on. All are busy working on program competencies, but Ms. Darnell feels very uncomfortable because she isn't actively teaching. She feels as though she isn't doing anything.

Compare your responses to the case situations with the model responses given below. Your responses need not exactly duplicate the model responses; however, you should have covered the same **major** points.

MODEL RESPONSES

1. The **problem** is that Mrs. Wellman is apparently not doing a consistent job of providing supervision for students working in different locations. It is of course commendable that she scheduled visits to the resource center; there is every chance that students working there would need her help.

   However, while she was off checking in on students in the resource center, trouble was brewing back in the unsupervised laboratory. Playing darts with hypodermic needles is certainly not the kind of activity a vocational instructor would want to be held liable for. What if a student were injured accidentally?

   The **solution** would be for Mrs. Wellman to ensure that adequate supervision is provided in all locations for which she is responsible. She could have appointed an advanced student as aide or monitor for her lab while she was out of the room. If there were teaching aides or volunteers, one of them could have supervised the activities of the students remaining in the lab.

   Better yet, if there were more than one instructor in her program, rotating supervision responsibilities would have been an excellent solution to the problem. If she taught alone, she might have been able to get another instructor who was free at the time to step into her lab and supervise students while she was gone.

   In addition, Mrs. Wellman should work with her students to foster mutual trust and a sense of responsibility. Students who have developed sincere respect for their instructor, who are committed to their occupational fields, and who are concerned about the learning environment in which they work are not likely to engage in the kind of group nonsense described here.

2. Mr. Hamilton has two management **problems**. First, he apparently doesn't use any kind of system for monitoring check-in/check-out of resources—and their condition. Second, he doesn't seem to have any record of who was using the model that morning.

   The **solution** is that Mr. Hamilton needs to set up and use record-keeping and monitoring systems. Only in this way will he be able to ensure that he knows enough about what his students are doing to furnish the resources they will need.

   He needs to develop—and use—some system for monitoring the use of resources and for inspecting them when they are returned to make sure that they are in good condition. By developing a simple check-in/check-out form and assigning responsibility for its use each day to an aide or student monitor, he could easily eliminate the problem of the poor, stomachless cow.

   And he needs to have some kind of record-keeping system that would tell him what competencies each of his students is working on at any given point. A simple progress chart would probably suit his purpose.

   The progress chart need not be complicated—just a chart showing the competencies and learning packages students are working on at the moment. He would, of course, have to keep the chart current, but this shouldn't take more than five or ten minutes a day.

3. The **problem** is that Mr. Adams is not using all his possible resources in providing instruction to students on this competency on applying for a job. As a result, repeating the role-playing activity with each individual student is obviously boring him to tears and driving him to distraction.

   The **solution** would be for Mr. Adams to identify other resources that could be used. For example, instead of participating in the role-play himself, he could use an advanced student, an aide, or a volunteer. Or he could pair students or assign them to small groups to perform the role-play.

   He might even be able to have students videotape their performance. They could then compare their own performance to a videotaped model performance and self-evaluate.

Use of any one of these techniques would have several good results. Mr. Adams would be free of the need to repeat this tiring activity. In addition, he wouldn't be having those negative feelings about CBE, which is a perfectly valid instructional approach.

Finally, and perhaps most important, he would have a lot more of his own valuable time to devote to the challenging and interesting functions of the resource person in CBE—facilitating, advising, evaluating, and providing information.

4. The **problem** is that Ms. Darnell feels uncomfortable about not "doing anything" in her CBE program. With the state department visitor observing, she is clearly concerned about what he or she must think about her competence as a teacher.

   But some clarification is needed. If she was sitting at her desk, literally doing nothing, she has every reason to feel uncomfortable. By no stretch of the imagination is the resource person in a CBE program justified in sitting still, like a bump on a log, while students are in the room.

   However, it's another thing entirely if she felt uncomfortable just because she wasn't "actively teaching"—i.e., dispensing information. The role of the resource person includes much more than just dispensing information. If she was actively involved in facilitating, advising, and evaluating, then her discomfort is unjustified. Dispensing information is certainly one part of the role of the resource person, but only one part.

   In either case, the **solution** is for Ms. Darnell to develop a better understanding of the role of the resource person in a CBE program. Perhaps the visitor from the state department will be able to help her get her thinking straight on this matter.

Level of Performance: Your written responses to the case situations should have covered the same **major** points as the model responses. If you missed some points or have questions about any additional points you made, review the material in the information sheet, Managing Instruction in CBE, pp. 18–31, or check with your resource person if necessary.

Learning Experience III

OVERVIEW

After completing the required reading, critique the performance of the teacher described in a given case study in managing student performance assessment in a CBE program.

You will be reading the information sheet, Managing Student Performance Assessment in CBE, pp. 38–42.

You will be reading the Case Study, p. 43, and critiquing the performance of the teacher described.

You will be evaluating your competency in critiquing the teacher's performance in managing student performance assessment in a CBE program by comparing your completed critique with the Model Critique, p. 45.

Student performance assessment is one of the daily routines that need to be managed in a CBE program. For information on the practical problems of performance assessment, as well as on providing postassessment feedback and keeping appropriate records of assessment results, read the following information sheet.

MANAGING STUDENT PERFORMANCE ASSESSMENT IN CBE

Assessing student performance and progress is one of the functions of the resource person in CBE. Once again, the task is not a completely new one—vocational-technical teachers have always assessed students' performance and progress. There are some unique concerns that need to be addressed as you perform this task in your CBE program, however.

Practical Problems of Assessment

Conducting performance tests may seem like a straightforward matter, but there are a number of practical problems to be solved. First, just as with written tests of knowledge, the old questions of validity and reliability need to be dealt with. You must devise an assessment situation that consistently measures what it is supposed to measure.

Validity should not be a particularly difficult issue if the competencies are carefully stated in terms of performance and if you are going to assess each student's performance on each competency. If, however, there are so many similar competencies that only critical ones can be selected for assessment—then the selection must be made with great care to be sure that the right skills are measured.

Reliability is a critical issue because, in a CBE program, any performance test will be given at many times during the year. The conditions of the test must be such that students of equal ability will receive an equal rating—no matter **when** they perform. This means that the materials, tools, and conditions should be identical each time a particular test is given.

Furthermore, in setting up a performance test for a competency such as *Troubleshoot a malfunctioning refrigeration system,* the refrigeration unit and the defect to be located should always pose a **problem at the same level**. It need not, however, always be the same problem, because word could soon get around among students, making the test useless.

In addition to general concerns about validity and reliability, there may be concerns related to providing real occupational situations in which to assess student performance. Problems may arise concerning the amount of time available for assessment, the resources required, the hazards involved, the unpredictability of human behavior, occupational situations that cannot easily be duplicated, and the need to assess several skills simultaneously. Some brief examples will help clarify these concerns.

Time required for assessment. Ideally, each student should be observed throughout the entire process of performing a competency. But followed to the letter, this could take an enormous amount of time, both for you and for the student.

Consider, for example, a chef training program in which there are three competencies (among scores of others) that require the trainee to prepare roast meat, roast fish, and roast fowl. Is it necessary—or feasible—to have the trainee perform all these time-consuming tasks just to be assessed, or could selected roasting operations be adequate indicators of overall proficiency?

One time-conserving technique is to evaluate only the product, where possible. Another is to use more advanced students to check out beginning students on lower-level skills. Another is to set aside a certain period of each day for assessment, reserving the rest for individualized instruction and conferences. If students are sent out for field experiences, on-the-job supervisors can be trained to make the appropriate assessments.

Resources required. Traditional tests and quizzes might call for nothing more in the way of supplies than a clean sheet of paper. However, in some competency-based occupational programs, the amount of costly materials used up in assessment could be very substantial. To assess students' ability to hang a door, for example, an instructor might want to furnish a new door and frame for each student, but such an expenditure of resources is rarely possible.

Instead, clever re-use of materials should be arranged whenever possible. For example, in auto body repair, a student could use the same fender in a number of different, sequential performance tests: straightening sheet metal, using body fillers, applying paint, and finishing painted surfaces.

Another problem, common to many occupational areas, occurs when you need to assess a student on a competency involving the operation of an elaborate piece of equipment—equipment that is not available in the school or college. Arranging to "borrow" the use of the equipment from business/industry and conducting the assessment on location may be the answer.

Hazards involved. The very act of performing some skills for assessment purposes may create personal hazards for you and for the student. This is especially true in assessing a student's ability to control emergency situations. It would probably not be wise, for example, to have a student braze a leaking gasoline tank in the school shop. If the student makes an error in the procedure, neither student nor instructor may be around to discuss the assessment results.

Similarly, it may promote realism, but it is unrealistic to pour molten metal on a damp concrete floor just to assess whether the student reacts properly to the emergency that will result. The solution could be to devise situations one step short of full reality (e.g., a computer simulation). Or you could break the hazardous operation into small actions; during the performance test, then, you would need to be ready to stop the process instantly if the student was about to make a serious error.

Unpredictability of human behavior. Machines can usually be depended upon to respond in known ways to a student's performance. Including **people** in the assessment situation introduces (as always) an element of unpredictability.

Yet many competencies involve dealing with people as co-workers, customers, or clients. If the competency was *Assign work to others,* for example, it would be important to observe and assess how the "others" responded to the student's performance. With resentment? Friendly cooperation? Dull apathy?

In some cases, it may be difficult to anticipate how people will react in these kinds of assessment situations. As a result, it would be hard to prepare a fair assessment instrument. Role-playing techniques, or use of videotaped situations to which the student responds, could be necessary substitutes.

Occupational situations that cannot easily be duplicated. A competency in a practical nursing program might involve preventing a person from choking by using the Heimlich Maneuver, a technique requiring quick and strong pressure to the victim's chest. Obviously, the best assessment situation would be to bring into the lab a person who is indeed choking, with a large piece of food lodged in his/her windpipe.

It is highly unlikely, however, that such a person can be found at the time of assessment. Nor is it likely that a volunteer, willing to lodge food in his/her windpipe for the sake of a performance test, could be located. Thus, a student might instead be asked to demonstrate the technique on a normal fellow classmate. But since cracking a rib in the process is a real hazard in this maneuver, a specially designed dummy is usually used for practicing and performing this skill.

This kind of assessment problem occurs most frequently in health occupations programs, but it may be found in other occupational programs as well. Consider, for example, an agricultural education program that includes the competency, *Control an infestation of mole crickets in turf grass.*

There are no easy solutions. Again, role-plays, simulations, or written problem-solving activities may have to be resorted to. In some instances, it is only necessary to delay final assessment until the specific situation occurs naturally in due course; at certain times of the year, there are more than enough mole crickets to go around.

Assessing several skills simultaneously. The question often arises about whether, in a CBE program, it is possible for the instructor to assess two or more competencies during the same student performance. The answer is yes, if the competencies are carefully selected and the situation properly controlled.

The competencies should be related, so that it is natural that they would be performed at the same time or in short sequence (e.g., typing a letter according to correct business format and proofreading that same letter). The performance should also be relatively brief, so that the assessment session doesn't drag on. If these conditions are met, multiple assessments can save time and effort on everybody's part.

One caution: you will be dealing with two or perhaps three performance checklists in a multiple-assessment situation, so your job can get complex. You must be thoroughly familiar with each item on the checklists, and you must observe and assess all items. There is no excuse for doing a haphazard job of assessment. It should probably be a rule that any student who plans to demonstrate more than one competency in an assessment session must have your prior approval.

Postassessment Feedback

Feedback on student performance must, of course, be provided to students throughout the learning experiences. You, the students themselves, peers, and tutors can all help to provide the continual feedback necessary for learning in a CBE program.

In a health occupations program, for example, students practicing handwashing can put Glo-Germ Simulated Germs (an orange liquid that glows under ultraviolet light) on their hands, wash them, and then go into a dark supply room with a black light to check their own performance. For written tests or activities, you—or an aide—can immediately grade each one using a key, return it, and spend a few minutes providing oral feedback.

Similarly, it is not enough just to post a grade after a final performance assessment in a CBE program. Each student should be provided with feedback on his/her performance as soon as possible after assessment has taken place. It is important to avoid any delays in providing feedback to a student, because this can cause frustration and impede student progress—preventing the student from beginning needed recycling activities or work on a new skill, for example.

To provide useful and timely postassessment feedback, two things are required. First, you must have a quick performance-rating turnaround time. The use of well-designed performance checklists (including process, product, time, and safety items, as necessary) will allow you to assess performance quickly and accurately.

Second, you must provide each student with a postassessment conference. You can use the conference to counsel the student on his/her progress or suggest alternate methods of attaining the competency if he/she was unsuccessful. Carefully and thoroughly completed performance checklists can be very helpful here.

The postassessment conference should be conducted in an area that provides a minimum amount of distractions and a maximum amount of privacy. Such an environment will allow you to conduct a frank and open—and uninterrupted—discussion of the student's performance.

In some CBE programs, an area is set aside just for assessing students' final performance and conducting postassessment conferences. The assessment and postassessment procedures are likely to be considerably more structured, complex, and time-consuming than in conventional programs. Therefore, anything you can do to organize the facility to facilitate the assessment function will be extremely helpful to you.

Asssessment Record Keeping

In order to know the status and progress of each student, complete records of student achievement must be maintained. As students complete the initial work (i.e., knowledge and practice activities) on a given competency and demonstrate their level of proficiency on a performance test, a record must immediately be made of their achievement.

The record forms and record-keeping procedures need not be complex, but they must be detailed and accurate. Above all, you must be scrupulous in keeping student progress records absolutely up-to-date. Trusting to memory and doing record keeping in "batches" at the end of the day or the week simply will not do.

At a minimum, a student progress record should include the following data:

- The student's complete planned program of occupational competencies
- The date the student began to work on any given competency (or learning guide)
- The dates of any final performance test attempts that were not successful, requiring the student to recycle

- The date each competency was successfully performed
- The final rating on each competency

You should enter these data on the student's record sheet as soon as each event occurs. It is convenient to carry these record sheets in a notebook so they are at hand at all times. Sample 8 shows a student record sheet that is suitable for use in a CBE program.

Typically, in a CBE program, the student's performance of a competency is rated against a checklist. These checklists constitute another part of your record keeping. You need to maintain a file for each student in your program. Then after each checklist has been completed, it should be placed in the student's file folder.

In addition to keeping an accurate record of the status and progress of individual students, you will need to maintain some form of chart that records the progress of the total student group. Teachers report that in individualized CBE programs, it is possible for a student to get "lost," as it were—making little or no progress without anyone noticing the situation. A simple class progress chart can be invaluable in keeping you aware of individual and class achievement.

Students can use the progress chart to quickly determine how well they are progressing toward their ultimate goals. You can use the chart to spot students who may be having learning difficulties or motivation problems.

Such a chart can be kept in a notebook or in some other easily accessible place. It may also be hung on a wall for easy reference, if displaying progress records in such a manner is allowable in your institution or appropriate given your student group. The units of progress across the top of the chart should, of course, represent the learning packages or competencies that make up the occupational program. Sample 9 shows a progress chart that could be used in a CBE program.

Some institutions (particularly those at the postsecondary level) are installing computer programs for maintaining records of student status, progress, and achievement in competency-based occupational programs. If such is the case in your institution, the periodic printouts furnished to you can be a rich source of information and can aid in identifying students with achievement problems, as well as reveal the need for curriculum revision.

SAMPLE 8

COMPETENCY ACHIEVEMENT RECORD

Occupational Training Program _____

Student's Name _____

Program Beginning Date _____ Program Completed _____

Instructor _____

		Dates		
Guide No.	Title	Started	Recycled	Achieved

SAMPLE 9

CLASS PROGRESS CHART

Class Period _____ Semester _____

	Learning Guides								
Students	A-1	A-2	A-3	A-4	A-5	B-1	B-2	B-3	B-4

The following case study describes how one vocational teacher managed student performance assessment in his CBE program. Read the case study and then **critique in writing** the teacher's performance, explaining (1) the strengths of the teacher's approach, (2) the weaknesses of the teacher's approach, and (3) how the teacher should have managed student performance assessment in his CBE program.

CASE STUDY

Janet Rogers, a student in Mr. Wayne's automotive mechanics program, had completed the learning package on installing and adjusting a carburetor. She had practiced the skill, used the performance checklist for self-assessment, and determined that she was ready for final performance assessment.

When Janet tried to arrange for the final assessment, she found that Mr. Wayne was busy giving a demonstration to a small group of students, so she waited a little while before meeting with him to arrange for the performance test.

During their meeting, Mr. Wayne first asked Janet how she had done on the practice and self-assessment activities. Then, after reviewing his records and determining that Janet was indeed ready for the final assessment, Mr. Wayne instructed her to gather all necessary tools and supplies.

While Janet got ready, Mr. Wayne checked the shop where the performance test was set up to be sure all was in readiness. Then Janet installed and adjusted a new carburetor under the watchful eye of Mr. Wayne. As Janet worked, Mr. Wayne used a performance checklist to assess the installation process.

Next he and Janet road tested the vehicle. At the end of the road test, Mr. Wayne completed the rest of the checklist; recorded the results in his records; and posted on the class progress chart, in the appropriate box, the date when she passed the test.

"Congratulations, Janet," Mr. Wayne said as he moved off to answer another student's urgent question. "You did, in general, an excellent job on that competency."

Janet smiled happily to herself as she checked the progress chart to verify which competency she was supposed to be working on next.

NOTES

Compare your written critique of the teacher's performance with the model critique given below. Your response need not exactly duplicate the model response; however, you should have covered the same **major** points.

MODEL CRITIQUE

Taken overall, Mr. Wayne's performance in managing Janet's assessment was good. His assessment was appropriate and appropriately conducted, for the most part. He also did well in recording the results of the assessment. He did make a couple of mistakes, however, one of them potentially serious.

First, let's look at what Mr. Wayne did right. He provided the assessment at the appropriate time in Janet's progress. She had had adequate time to practice the skill, judging from what we know. And she had assessed her own readiness for the performance test.

In addition, Mr. Wayne used the appropriate technique—performance testing—to assess Janet's skill (both process and product) in this competency. He must have been aware that a paper-and-pencil test would not have been a valid means of testing her **ability** to perform this competency, however well it might have tested her knowledge of the job.

Also, we can assume that Janet was aware of the specific criteria against which her performance would be assessed. She had used a copy of the performance checklist herself, when she assessed her readiness for the performance test. Thus, the standards for successful performance were known to her in advance of assessment.

Finally, Mr. Wayne recorded the results of the performance assessment immediately. This was excellent. By doing so, he avoided various problems—entering data incorrectly later, when he finally did remember to record them, or possibly forgetting altogether to record the data.

In fact, record keeping seems to be one of Mr. Wayne's strong suits. He was able to determine her readiness by checking his records. And Janet was able to quickly verify which competency to tackle next by checking a progress chart, which Mr. Wayne seems to keep up-to-date.

Mr. Wayne's performance included two weaknesses. One was that he totally neglected one important part of assessment: the provision of postassessment feedback. Unfortunately, this is a potentially serious mistake. He should have held a conference with Janet to go over the results of her assessment in detail. This really should not have taken very long, since she did well on the performance test.

The second weakness was that Mr. Wayne made it somewhat difficult for Janet to meet with him to set up the performance assessment. He should have been more organized, perhaps providing an assessment sign-up or request procedure other than "ask Mr. Wayne."

In summary, Mr. Wayne did fairly well in managing Janet's assessment. He could improve his performance by remembering to give students more meaningful feedback after assessment and by getting a better grip on scheduling his time. With these relatively small improvements, he could do an excellent job of managing student performance assessment in his CBE program.

Level of Performance: Your written critique of the teacher's performance should have covered the same **major** points as the model critique. If you missed some points or have questions about any additional points you made, review the material in the information sheet, Managing Student Performance Assessment in CBE, pp. 38–42, or check with your resource person if necessary.

NOTES

Learning Experience IV

OVERVIEW

Given the opportunity to observe and assess the techniques used to manage the daily routines of a vocational program, develop a plan for making those techniques more compatible with a CBE approach.

You will be visiting a vocational program, and using the Management Observation Checklist, p. 49, to assess the techniques used to manage the daily routines in that program.

You will be developing a plan for making the techniques used to manage the daily routines of the program more compatible with a CBE approach.

Your competency in developing a plan for making the techniques used to manage the daily routines of a vocational program more compatible with a CBE approach will be evaluated by your resource person, using the CBE Management Planning Checklist, p. 51.

Arrange through your resource person to visit a vocational-technical program in your occupational specialty (or one closely related to it) and observe that program. The program you select should be one in which CBE has not yet been implemented. If you are an inservice teacher, you may complete this activity by reviewing your own instructional program.

During your observation visit, note the techniques used by the instructor to manage daily routines (e.g., management of students, materials, tools, equipment, instruction, and final assessment).

Using the Management Observation Checklist, p. 49, assess the techniques used by the instructor to manage daily routines.

MANAGEMENT OBSERVATION CHECKLIST

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
	N/A	No	Partial	Full
In managing the daily routines of the program, the teacher:				
1. provided a resource center for students' use that:				
a. was convenient for students	☐	☐	☐	☐
b. was reasonably quiet and free from distractions	☐	☐	☐	☐
c. allowed for teacher supervision and assistance	☐	☐	☐	☐
2. used a system for the efficient storage, control, and distribution of instructional materials that:				
a. was readily accessible to students	☐	☐	☐	☐
b. was easily maintained	☐	☐	☐	☐
c. provided for the regular updating of materials	☐	☐	☐	☐
3. held to a schedule of classroom and lab management that:				
a. was known to students	☐	☐	☐	☐
b. made efficient use of time	☐	☐	☐	☐
4. used a student progress and achievement reporting system that:				
a. was relatively convenient to maintain	☐	☐	☐	☐
b. was available and comprehensible to students	☐	☐	☐	☐
c. indicated the total program and status of each individual	☐	☐	☐	☐
5. used an official record-keeping system that provided data on the competencies, ratings, and rate of progress of each individual student, as well as of the class as a whole	☐	☐	☐	☐
6. assessed individual students:				
a. when the student was ready	☐	☐	☐	☐
b. on each specified competency	☐	☐	☐	☐
7. held a postassessment conference with each student to discuss the results of evaluation	☐	☐	☐	☐
8. used instructional planning procedures that would provide for the individual learning needs of students at various stages of progress	☐	☐	☐	☐

Based on your assessment, develop a plan for making the management techniques you observed more compatible with a CBE approach. Be specific and positive in your statements, and remember to limit your comments and recommendations to issues related to the **management of the daily routines**.

After you have developed your plan for making the management techniques more compatible with a CBE approach, arrange to have your resource person review and evaluate your plan. Give him/her the CBE Management Planning Checklist, p. 51, to use in evaluating your work.

CBE MANAGEMENT PLANNING CHECKLIST

Directions: Place an X in the NO, PARTIAL, or FULL box to indicate that each of the following performance components was not accomplished, partially accomplished, or fully accomplished. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

Name _____

Date _____

Resource Person _____

	LEVEL OF PERFORMANCE			
The teacher's plan to make the observed management techniques more compatible with a CBE approach would provide for:	N/A	No	Partial	Full
1. the resource person to function as a facilitator, advisor, and evaluator	☐	☐	☐	☐
2. the students to take more responsibility for their own learning . .	☐	☐	☐	☐
3. instruction to be individualized and personalized	☐	☐	☐	☐
4. a variety of activities to occur both simultaneously and smoothly	☐	☐	☐	☐
5. the adequate supervision of all students in the program, regardless of where they are working	☐	☐	☐	☐
6. the resource person to be available to the students as needed . .	☐	☐	☐	☐
7. all needed resources to be available to the students as needed .	☐	☐	☐	☐
8. effective storage and distribution of all learning packages	☐	☐	☐	☐
9. effective monitoring and inventorying of all resources	☐	☐	☐	☐
10. live work to be completed based on student needs and scheduled in a timely fashion	☐	☐	☐	☐
11. assessment of student performance at an appropriate time in the student's progress	☐	☐	☐	☐
12. provision of adequate student feedback	☐	☐	☐	☐
13. simple and efficient record keeping of student status, progress, and achievement, both on an individual and total class basis	☐	☐	☐	☐

Level of Performance: All items must receive N/A or FULL responses. If any item receives a NO or PARTIAL response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

NOTES

Learning Experience V

FINAL EXPERIENCE

In an **actual teaching situation,*** manage the daily routines of your CBE program.

As part of your teaching duties, manage the daily routines of your CBE program. This will include—

- managing students
- managing instruction
- managing resources
- managing scheduling
- managing assessment
- managing record keeping

NOTE: Due to the nature of this experience, you will need to have access to an actual teaching situation over an extended period of time (e.g., four to six weeks).

As you complete each of the above activities, document your actions (in writing, on tape, through a log) for assessment purposes.

Arrange to have your resource person review your documentation and visit your CBE program to observe your management of daily routines.

Your total competency will be assessed by your resource person, using the Teacher Performance Assessment Form, pp. 55–56.

Based upon the criteria specified in this assessment instrument, your resource person will determine whether you are competent in managing the daily routines of your CBE program.

* For a definition of "actual teaching situation," see the inside back cover.

NOTES

TEACHER PERFORMANCE ASSESSMENT FORM

Manage the Daily Routines of Your CBE Program (K-5)

Name _____

Date _____

Resource Person _____

Directions: Indicate the level of the teacher's accomplishment by placing an X in the appropriate box under the LEVEL OF PERFORMANCE heading. If, because of special circumstances, a performance component was not applicable, or impossible to execute, place an X in the N/A box.

	LEVEL OF PERFORMANCE					
In managing the CBE program, the teacher:	N/A	None	Poor	Fair	Good	Excellent
1. adapted to the changed role of teacher by functioning as a resource person	☐	☐	☐	☐	☐	☐
2. allowed students to assume individual responsibility for learning	☐	☐	☐	☐	☐	☐
3. provided for the development of **personalized** programs for individual students	☐	☐	☐	☐	☐	☐
4. used a variety of teaching techniques, designed to match learner capabilities with the requirements of the tasks	☐	☐	☐	☐	☐	☐
5. coordinated student learning activities in different areas at the same time	☐	☐	☐	☐	☐	☐
6. scheduled individual, small-group, and large-group activities as appropriate and necessary	☐	☐	☐	☐	☐	☐
7. maintained a resource center that:						
a. made materials readily accessible to students	☐	☐	☐	☐	☐	☐
b. provided appropriate facilities and an environment for quiet work	☐	☐	☐	☐	☐	☐
c. provided for student supervision and one-to-one instruction	☐	☐	☐	☐	☐	☐
8. managed the storage and use of CBE materials, equipment, records, supplies, etc., so that:						
a. they were readily accessible to all students	☐	☐	☐	☐	☐	☐
b. maintenance of each was easily accomplished	☐	☐	☐	☐	☐	☐
c. inventories were easily kept up-to-date	☐	☐	☐	☐	☐	☐
9. provided instructional materials that were:						
a. in good condition	☐	☐	☐	☐	☐	☐
b. accessible to students	☐	☐	☐	☐	☐	☐

	N/A	None	Poor	Fair	Good	Excellent
10. provided equipment and tools that were:						
a. appropriate and necessary to deliver on all program competencies	☐	☐	☐	☐	☐	☐
b. in good condition and accessible when needed by individual students	☐	☐	☐	☐	☐	☐
11. provided continual feedback to students personally or through the CBE materials	☐	☐	☐	☐	☐	☐
12. monitored individual student progress through conferences	☐	☐	☐	☐	☐	☐
13. conducted individual student performance assessments of specified occupational competencies:						
a. at appropriate times	☐	☐	☐	☐	☐	☐
b. in an appropriate manner	☐	☐	☐	☐	☐	☐
14. maintained accurate records of individual student progress and class progress	☐	☐	☐	☐	☐	☐
15. conducted evaluations of management procedures to improve the efficiency of the CBE program	☐	☐	☐	☐	☐	☐

Level of Performance: All items must receive N/A, GOOD, or EXCELLENT responses. If any item receives a NONE, POOR, or FAIR response, the teacher and resource person should meet to determine what additional activities the teacher needs to complete in order to reach competency in the weak area(s).

ABOUT USING THE NATIONAL CENTER'S PBTE MODULES

Organization

Each module is designed to help you gain competency in a particular skill area considered important to teaching success. A module is made up of a series of learning experiences, some providing background information, some providing practice experiences, and others combining these two functions. Completing these experiences should **enable** you to achieve the **terminal** objective in the final learning experience. The final experience in each module always requires you to demonstrate the skill in an actual teaching situation when you are an intern, a student teacher, an inservice teacher, or occupational trainer.

Procedures

Modules are designed to allow you to individualize your teacher education program. You need to take only those modules covering skills that you do not already possess. Similarly, you need not complete any learning experience within a module if you already have the skill needed to complete it. Therefore, before taking any module, you should carefully review (1) the introduction, (2) the objectives listed on p. 4, (3) the overviews preceding each learning experience, and (4) the final experience. After comparing your present needs and competencies with the information you have read in these sections, you should be ready to make one of the following decisions:

- That you do not have the competencies indicated and should complete the entire module
- That you are competent in one or more of the enabling objectives leading to the final learning experience and, thus, can omit those learning experiences
- That you are already competent in this area and are ready to complete the final learning experience in order to "test out"
- That the module is inappropriate to your needs at this time

When you are ready to complete the final learning experience **and** have access to an actual teaching situation, make the necessary arrangements with your resource person. If you do not complete the final experience successfully, meet with your resource person and arrange to (1) repeat the experience or (2) complete (or review) previous sections of the module or other related activities suggested by your resource person before attempting to repeat the final experience.

Options for recycling are also available in each of the learning experiences preceding the final experience. Any time you do not meet the minimum level of performance required to meet an objective, you and your resource person may meet to select activities to help you reach competency. This could involve (1) completing parts of the module previously skipped, (2) repeating activities, (3) reading supplementary resources or completing additional activities suggested by the resource person, (4) designing your own learning experience, or (5) completing some other activity suggested by you or your resource person.

Terminology

Actual Teaching Situation: A situation in which you are actually working with and responsible for teaching secondary or postsecondary vocational students or other occupational trainees. An intern, a student teacher, an inservice teacher, or other occupational trainer would be functioning in an actual teaching situation. If you do **not** have access to an actual teaching situation when you are taking the module, you can complete the module **up to** the final learning experience. You would then complete the final learning experience later (i.e., when you have access to an actual teaching situation).

Alternate Activity or Feedback: An item that may **substitute** for required items that, due to special circumstances, you are unable to complete.

Occupational Specialty: A specific area of preparation within a vocational service area (e.g., the service area Trade and Industrial Education includes occupational specialties such as automobile mechanics, welding, and electricity.

Optional Activity or Feedback: An item that is not required but that is designed to **supplement** and enrich the required items in a learning experience.

Resource Person: The person in charge of your educational program (e.g., the professor, instructor, administrator, instructional supervisor, cooperating/supervising/classroom teacher, or training supervisor who is guiding you in completing this module).

Student: The person who is receiving occupational instruction in a secondary, postsecondary, or other training program.

Vocational Service Area: A major vocational field: agricultural education, business and office education, marketing and distributive education, health occupations education, home economics education, industrial arts education, technical education, or trade and industrial education.

You or the Teacher/Instructor: The person who is completing the module.

Levels of Performance for Final Assessment

N/A: The criterion was not met because it was **not applicable** to the situation.

None: No attempt was made to meet the criterion, although it was relevant.

Poor: The teacher is unable to perform this skill or has only **very limited ability** to perform it.

Fair: The teacher is unable to perform this skill in an acceptable manner but has **some ability** to perform it.

Good: The teacher is able to perform this skill in an **effective** manner.

Excellent: The teacher is able to perform this skill in a **very effective** manner.

Titles of the National Center's Performance-Based Teacher Education Modules

Category A: Program Planning, Development, and Evaluation

- A-1 Prepare for a Community Survey
- A-2 Conduct a Community Survey
- A-3 Report the Findings of a Community Survey
- A-4 Organize an Occupational Advisory Committee
- A-5 Maintain an Occupational Advisory Committee
- A-6 Develop Program Goals and Objectives
- A-7 Conduct an Occupational Analysis
- A-8 Develop a Course of Study
- A-9 Develop Long-Range Program Plans
- A-10 Conduct a Student Follow-Up Study
- A-11 Evaluate Your Vocational Program

Category B: Instructional Planning

- B-1 Determine Needs and Interests of Students
- B-2 Develop Student Performance Objectives
- B-3 Develop a Unit of Instruction
- B-4 Develop a Lesson Plan
- B-5 Select Student Instructional Materials
- B-6 Prepare Teacher-Made Instructional Materials

Category C: Instructional Execution

- C-1 Direct Field Trips
- C-2 Conduct Group Discussions, Panel Discussions, and Symposiums
- C-3 Employ Brainstorming, Buzz Group, and Question Box Techniques
- C-4 Direct Students in Instructing Other Students
- C-5 Employ Simulation Techniques
- C-6 Guide Student Study
- C-7 Direct Student Laboratory Experience
- C-8 Direct Students in Applying Problem-Solving Techniques
- C-9 Employ the Project Method
- C-10 Introduce a Lesson
- C-11 Summarize a Lesson
- C-12 Employ Oral Questioning Techniques
- C-13 Employ Reinforcement Techniques
- C-14 Provide Instruction for Slower and More Capable Learners
- C-15 Present an Illustrated Talk
- C-16 Demonstrate a Manipulative Skill
- C-17 Demonstrate a Concept or Principle
- C-18 Individualize Instruction
- C-19 Employ the Team Teaching Approach
- C-20 Use Subject Matter Experts to Present Information
- C-21 Prepare Bulletin Boards and Exhibits
- C-22 Present Information with Models, Real Objects, and Flannel Boards
- C-23 Present Information with Overhead and Opaque Materials
- C-24 Present Information with Filmstrips and Slides
- C-25 Present Information with Films
- C-26 Present Information with Audio Recordings
- C-27 Present Information with Televised and Videotaped Materials
- C-28 Employ Programmed Instruction
- C-29 Present Information with the Chalkboard and Flip Chart
- C-30 Provide for Students' Learning Styles

Category D: Instructional Evaluation

- D-1 Establish Student Performance Criteria
- D-2 Assess Student Performance: Knowledge
- D-3 Assess Student Performance: Attitudes
- D-4 Assess Student Performance: Skills
- D-5 Determine Student Grades
- D-6 Evaluate Your Instructional Effectiveness

Category E: Instructional Management

- E-1 Project Instructional Resource Needs
- E-2 Manage Your Budgeting and Reporting Responsibilities
- E-3 Arrange for Improvement of Your Vocational Facilities
- E-4 Maintain a Filing System
- E-5 Provide for Student Safety
- E-6 Provide for the First Aid Needs of Students
- E-7 Assist Students in Developing Self-Discipline
- E-8 Organize the Vocational Laboratory
- E-9 Manage the Vocational Laboratory
- E-10 Combat Problems of Student Chemical Use

Category F: Guidance

- F-1 Gather Student Data Using Formal Data-Collection Techniques
- F-2 Gather Student Data Through Personal Contacts
- F-3 Use Conferences to Help Meet Student Needs
- F-4 Provide Information on Educational and Career Opportunities
- F-5 Assist Students in Applying for Employment or Further Education

Category G: School–Community Relations

- G-1 Develop a School–Community Relations Plan for Your Vocational Program
- G-2 Give Presentations to Promote Your Vocational Program
- G-3 Develop Brochures to Promote Your Vocational Program
- G-4 Prepare Displays to Promote Your Vocational Program
- G-5 Prepare News Releases and Articles Concerning Your Vocational Program
- G-6 Arrange for Television and Radio Presentations Concerning Your Vocational Program
- G-7 Conduct an Open House
- G-8 Work with Members of the Community
- G-9 Work with State and Local Educators
- G-10 Obtain Feedback about Your Vocational Program

Category H: Vocational Student Organization

- H-1 Develop a Personal Philosophy Concerning Vocational Student Organizations
- H-2 Establish a Vocational Student Organization
- H-3 Prepare Vocational Student Organization Members for Leadership Roles
- H-4 Assist Vocational Student Organization Members in Developing and Financing a Yearly Program of Activities
- H-5 Supervise Activities of the Vocational Student Organization
- H-6 Guide Participation in Vocational Student Organization Contests

Category I: Professional Role and Development

- I-1 Keep Up to Date Professionally
- I-2 Serve Your Teaching Profession
- I-3 Develop an Active Personal Philosophy of Education
- I-4 Serve the School and Community
- I-5 Obtain a Suitable Teaching Position
- I-6 Provide Laboratory Experiences for Prospective Teachers
- I-7 Plan the Student Teaching Experience
- I-8 Supervise Student Teachers

Category J: Coordination of Cooperative Education

- J-1 Establish Guidelines for Your Cooperative Vocational Program
- J-2 Manage the Attendance, Transfers, and Terminations of Co-Op Students
- J-3 Enroll Students in Your Co-Op Program
- J-4 Secure Training Stations for Your Co-Op Program
- J-5 Place Co-Op Students on the Job
- J-6 Develop the Training Ability of On-the-Job Instructors
- J-7 Coordinate On-the-Job Instruction
- J-8 Evaluate Co-Op Students' On-the-Job Performance
- J-9 Prepare for Students' Related Instruction
- J-10 Supervise an Employer–Employee Appreciation Event

Category K: Implementing Competency-Based Education (CBE)

- K-1 Prepare Yourself for CBE
- K-2 Organize the Content for a CBE Program
- K-3 Organize Your Class and Lab to Install CBE
- K-4 Provide Instructional Materials for CBE
- K-5 Manage the Daily Routines of Your CBE Program
- K-6 Guide Your Students Through the CBE Program

Category L: Serving Students with Special/Exceptional Needs

- L-1 Prepare Yourself to Serve Exceptional Students
- L-2 Identify and Diagnose Exceptional Students
- L-3 Plan Instruction for Exceptional Students
- L-4 Provide Appropriate Instructional Materials for Exceptional Students
- L-5 Modify the Learning Environment for Exceptional Students
- L-6 Promote Peer Acceptance of Exceptional Students
- L-7 Use Instructional Techniques to Meet the Needs of Exceptional Students
- L-8 Improve Your Communication Skills
- L-9 Assess the Progress of Exceptional Students
- L-10 Counsel Exceptional Students with Personal–Social Problems
- L-11 Assist Exceptional Students in Developing Career Planning Skills
- L-12 Prepare Exceptional Students for Employability
- L-13 Promote Your Vocational Program with Exceptional Students

Category M: Assisting Students in Improving Their Basic Skills

- M-1 Assist Students in Achieving Basic Reading Skills
- M-2 Assist Students in Developing Technical Reading Skills
- M-3 Assist Students in Improving Their Writing Skills
- M-4 Assist Students in Improving Their Oral Communication Skills
- M-5 Assist Students in Improving Their Math Skills
- M-6 Assist Students in Improving Their Survival Skills

RELATED PUBLICATIONS

Student Guide to Using Performance-Based Teacher Education Materials
Resource Person Guide to Using Performance-Based Teacher Education Materials
Guide to the Implementation of Performance-Based Teacher Education
Performance-Based Teacher Education: The State of the Art, General Education and Vocational Education

For information regarding availability and prices of these materials contact—AAVIM, American Association for Vocational Instructional Materials, 120 Driftmier Engineering Center, University of Georgia, Athens, Georgia 30602, (404) 542-2586

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